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THE SERVICE QUALITY FACTORS: SATISFACTION, DISSATISFACTION AND RECOVERY

Volume 1 of 2

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SUMMARY

Service quality appears to transcend a number of, as yet, only loosely related fields including operations management, service management and consumer behaviour. The intention of the first part of this research was to draw together some parts of these complementary literatures in order to understand the nature of service quality.

The objective of the empirical study was to identify the customer-based determinants of service quality, in particular to identify those service quality factors which tend to lead to satisfaction, those that tend to lead to dissatisfaction and those that are important to the process of service recovery. The purpose of the research was to add to the growing body of knowledge on service quality and to help managers undertake activities for the measurement, control and improvement of service quality. The empirical study took a logical positivist/empiricist approach using customer's perceptions of reality. The chosen research instrument was the critical incident technique.

The study found that the various quality factors do have different, though not exclusive, effects on the outcome of the service experience in terms of satisfaction or dissatisfaction. It was also found that the dissatisfaction factors and the satisfaction factors are not the obverse of each other. Furthermore, the satisfaction factors are primarily tangible factors, underlining the critical role of service staff in providing satisfaction, and the dissatisfaction factors are primarily intangible factors stressing the more systemic issues that tend to result in dissatisfaction. It was suggested that these factors may either act as switches, amending customers' perceptions of the service experience during the service itself, or act as levers upon the customers' satisfaction or dissatisfaction thresholds. Service recovery was also identified as a key creator of satisfaction and a number of factors were identified that support the recovery process.

It has been suggested that operations managers should be concerned with designing-in satisfaction switches/levers and removing dissatisfaction switches/levers. They should also be concerned with implementing systems to seek out failures and to try to recover from them.

Chapter 1

INTRODUCTION

BACKGROUND

Service quality is becoming a key issue for academics and industrialists, (see for example Buzzell and Gale 1987, Hart 1988, Humble 1989, Walker 1990, Quinn Dorley and Paquette 1990, Zeithaml et al 1990, Fitzgerald et al 1991 and Martin and Horne 1992). However, research into service quality whilst rapidly expanding could still be considered to be in its infancy. This is in contrast to the literature on product quality which appears to be a well recognised and developed body of tools and techniques for the control, planning and improvement of product quality.

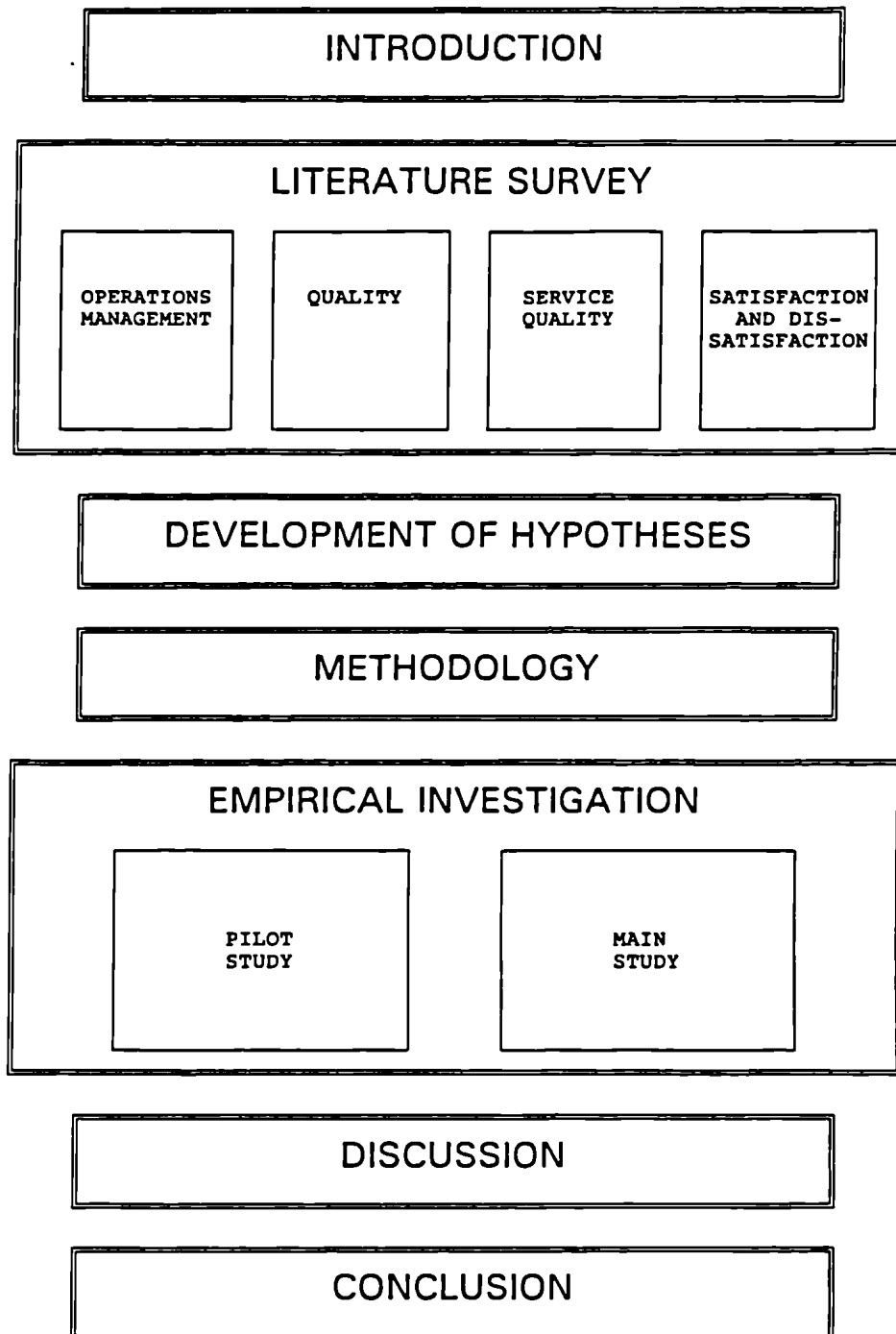
Whilst product quality has developed within the overlapping fields of manufacturing management and industrial engineering, the emerging service quality field seems to transcend a number of, as yet, only loosely related fields. Operations management is concerned with the delivery of both the service and product parts of the service package and is involved in the design and control and improvement of the service provided to customers. Service management is a newly emerging field, dominated by marketers, that is concerned

with the nature of service quality, its creation and the implications for the customer. A part of the consumer behaviour field is concerned with understanding the nature of the creation of satisfaction and dissatisfaction in the minds of customers and the implications upon attitudes and future behaviour and purchase intentions.

OBJECTIVE

The objective of this thesis is to try to understand what causes a feeling of satisfaction or dissatisfaction during, and as a result of, a service process in the minds of customers. The intention of the first part of this research is to try to bring together some parts of the complementary literatures in order to understand the nature of service quality. The objective of the empirical study is to identify the customer-based determinants of service quality, in particular to identify those service quality factors which tend to lead to satisfaction, those that tend to lead to dissatisfaction and those that are important to the process of service recovery. The purpose of the research is not only to add to the growing body of knowledge on service quality but also to help managers understand how to satisfy customers and to predict better the likely outcomes of their operational decisions including quality measurement, control and improvement.

THE STRUCTURE



In essence, chapters two to five provide reviews of the literatures. In chapter six some of the ideas from the literature are brought together and the study's hypotheses are developed. Chapter seven contains discussion of possible research philosophies and of the chosen methodology and instrument for this research. The empirical investigation is contained in chapters eight and nine. Chapters ten and eleven cover the discussion of the results and the conclusions from the study. The following sections provide the objectives and key themes for each of the chapters.

Chapter 2 Operations: From factory to service management

The objective of this chapter is to provide an operations context for this research through a narrative that places service operations and service management into an historical context. It traces the historical development of operations management from its factory management base and explores how the subject has tried to incorporate service operations issues from the mid 1970s and its association with service management in the 1980s and 1990s.

Chapter 3 Quality

The objective of this chapter is to review the operations management literature to identify and understand the developments that have taken place in quality management. Its purpose is first to set quality and service quality into an operations management context and second to highlight the need for a more strategic and service oriented approach to quality.

Chapter 4 Service quality

A body of knowledge about service quality specifically is found in the emerging service management literature. The purpose of this chapter is to review the main service quality literature and some of the main service quality models and concepts which lead to customer satisfaction and dissatisfaction.

Chapter 5 Satisfaction and dissatisfaction

There is an established body of knowledge in the consumer behaviour literature which concerns satisfaction and dissatisfaction. The objective of this chapter is to review some of the consumer behaviour literature that focuses on customer satisfaction and dissatisfaction in order to understand the nature of satisfaction and

dissatisfaction. It also attempts to throw some light on the difference between satisfaction and service quality.

Chapter 6 Development of hypotheses

The objective of this chapter is to develop the hypotheses for testing in the empirical part of this research. It draws together the pertinent conclusions from the literature and then proposes a synthesized model of satisfaction that integrates the three literatures to provide a conceptual framework for the development of the hypotheses.

Chapter 7 Methodology

The purpose of this chapter is to identify an appropriate methodology for this research. It explores a range of research philosophies and applies them to operations management research in general and to this research in particular. A number of alternative research methods are assessed and a detailed research design is developed.

Chapter 8 Pilot study

The objective of the pilot study is to undertake a preliminary test of the hypotheses involving an investigation into the causes of satisfaction, dissatisfaction and recovery. Its purpose is also to

ascertain if the chosen instrument and the method of analysis are applicable and appropriate for use in the main study.

Chapter 9 Main study

The objective of this chapter is to describe the main empirical study and to provide an analysis of the data collected.

Chapter 10 Discussion

This chapter takes each of the hypotheses in turn and discusses the implications of the data and the analysis contained in both the pilot study and the main study.

Chapter 11 Conclusion

The objective of this final chapter is to set the findings in the context of the literature and to discuss possible implications and extensions.

Chapter 2

OPERATIONS: FROM FACTORY TO SERVICE MANAGEMENT

SUMMARY

The objective of this chapter is to provide an operations context for the research. It traces the historical development of operations management from its factory management base. It explores how the subject has tried to incorporate service operations issues from the mid 1970s and its association with service management in the 1980s and 1990s.

What emerges is a view of a subject which is moulded and constrained by its manufacturing roots, as a result of its past development from industrial engineering, scientific management, systems theory and operational research. It is primarily an inward looking subject predominantly concerned with the efficiency of the operation.

The recognition of the importance of the service economy and the application of some traditional manufacturing tools and techniques in the service area has led to some limited integration of service issues in the traditional texts.

It appears, however, that modern operations management is struggling to come to terms with the "service revolution" and the emerging service imperative. The difficulties the mainstream operations function seems to be having in integrating service issues suggests that it is still very much an inward, efficiency-oriented manufacturing subject which does not seem to be able to cope with the more externally oriented, customer facing view of service.

More recently service operations has found a home in the emerging cross-disciplinary field of service management. Here there is a set of shared issues and concerns and a wide literature on which to draw.

INTRODUCTION

The subject of this dissertation is quality, and service quality and satisfaction in particular. Its intention is to try to understand what causes a feeling of satisfaction or dissatisfaction during, and as a result of, a service process.

The objective of this chapter is to provide an operations context for this research. This chapter reviews some of the "traditional" operations literature to provide a narrative that places service operations and service management into an historical context. The three following chapters review the quality, service quality and satisfaction literatures.

The first section in this chapter traces the development of operations management from the time before the industrial revolution until the 1990s.

The second section investigates how well the emerging service imperative has been integrated into the operations management literature.

The third section briefly explores the emergence of the new cross functional subject of service management.

THE DEVELOPMENT OF OPERATIONS MANAGEMENT

Over the last 200 to 300 years much of the world has changed from using home-based craft production systems to the relatively more efficient modern industrial systems of today. During this period many individuals and organisations have put their efforts into the development of now widely recognised tools and techniques, for example layout design, job design and various control systems. The application of these techniques has resulted in a "relative abundance of physical goods at low cost, available in a fantastic range of items undreamed of by our ancestors" (Buffa, 1976). The legacy of these developments is a body of knowledge, experience and techniques known as operations management (or production/operations management) covering such topics as layout, production planning, inventory control and quality control.

In order to understand the identity, distinctiveness and limitations of the subject it is appropriate to understand its historical development. This section briefly traces the development of operations management from the pre-industrial revolution period (before 1700) through factory management (from about 1700 to 1940), the application of operations research and the systems approach (1940 to the late 1950s), to the development of modern production management (from the late 1950s). It

also briefly considers some recent trends (from 1970 onwards).

Pre-factory operations management

The planning and control of operations, the scheduling of resources and the control of quality, for example, are not just recent management concerns. Many of these principles must have been employed since the time that homo erectus made the first stone tools. Since that time, man has been "developing tools, cooperative systems for hunting, and gathering food, cooperative family and larger group systems for sharing tasks, building shelters, etc" (Buffa, 1976). No-one knows who conceived the first production system but many of the monuments from the ancient world must have required not only technical know-how but also complex managerial systems to plan, organise and build such legacies as the great Egyptian pyramids constructed in about 2500 BC, or the Greek Parthenon in about 440 BC, the Great Wall of China, 214 BC and Roman aqueducts, roads and public buildings between about 400 and 100 BC.

Factory management

It is not surprising then that "We in the field of operations management (OM) consider our field to be one of the oldest in business schools pre-dating the

emergence of finance and accounting by decades. In those times it was known as 'factory management'" (Meredith and Amoako-Gyampah, 1990).

Factory management developed with the onset of the industrial revolution during the period when factories were created and developed into efficient and remorseless production units. This period saw a significant increase in outputs as a result of more "organised" human activity (Johnson et al 1972, Chase and Aquilano 1973). The main efficiency creators were the substitution of external energy sources for manpower (for example Hargreaves's spinning jenny and Watt's steam engine), and changes in the planning and organising of work, for example the division of labour, as described by Adam Smith in *The Wealth of Nations*, 1776. Smith's ideas were developed and refined by Babbage though the major historical landmark for the field (Johnson et al 1972, Chase and Aquilano 1973, Evans et al 1990) was Frederick Taylor's philosophy of "scientific management", written up in 1911.

Taylor's philosophy was that scientific laws govern how much a man can produce per day and so it is the task of management to discover and use these laws. Method study, time and motion study, planning and progress charting, pay incentives, and standardisation of practices resulted. These are the direct descendants of many of

the principles of modern operations management which are now such a great part of present day practice (see for example Lockyer 1962).

1913 saw the introduction of the moving assembly line for the manufacture of Ford cars. Ford is said to have got the idea from observing the manufacture of Swiss watches (Chase and Aquilano 1989). This technique was seen to be revolutionary and its effects were significant. In Ford's own words "Only the old, outworn notions stand in the way of these new ideas. The World shackles itself, blinds its eyes, and then wonders why it cannot run! Take just one idea ... that of making a small, simple automobile, to make it cheaply and pay high wages in its making. On June 4, 1924, we made our ten millionth. This is interesting but perhaps not important. What is important is that, from a mere handful of men employed in a shop, we have grown into a large industry directly employing more than two thousand men" (Ford, 1926).

Operations research and the systems approach

The most recent and rapid development of the concepts, theories and techniques of operations management took place during World War II. At this time operations research (OR) techniques were being applied to military problems. The implementation of many of the "new" techniques, for example PERT/CPM, inventory control,

simulation and queueing theories, although seemingly efficient, tended to lead to the optimisation of subsystems. The gains made here were then often lost in other parts of the system (Buffa 1976, Evans et al 1990).

During the 1950s a broader systems view was introduced by von Bertalanffy (1950) which led to a wider application of systems thinking in management (see for example von Bertalanffy 1956 and 1962, Ackoff 1960, Forrester 1961, Hall 1962, Johnson, Kast and Rosenzweig 1963, Churchman 1968). Much of their "systems thinking" has been embodied in more recent operations texts for example Lockyer 1962, Wild 1971 and 1977, Johnson et al 1972. As Lockyer stated "It is only when a factory is understood to be part of a whole - a sub-system within a system - that its management can be truly successful".

Thompson too criticised scientific management for having efficiency as its ultimate criterion seeking "to maximise efficiency by planning procedures according to technical logic, setting standards and exercising controls to ensure conformity with standards" (1987). He wrote in favour of a more "open-systems strategy" which needed to recognise the organisation as an open, natural, complex system with more variables "than we can comprehend at one time" where there is a need to develop "patterned, adaptive responses of human beings in problematic situations". Variables, he claimed, are not subject to

complete "scientific" control but are natural and adaptive and thus the central problem for organisations is in coping with uncertainty.

Modern production management

"Modern operations did not come into its own until probably the late 1950s" (Meredith and Amoako-Gyampah, 1990) with a plethora of texts including what are now widely recognised as the standard topics; production planning and control, facilities design, materials management, capacity management and quality management (see for example Buffa 1969, Lowe 1970, Wild 1971, Johnson et al 1972, Starr 1972, Chase and Aquilano 1973). Many of these texts adopted an approach clearly influenced by systems thinking. They also recognised the limitations of the "scientific approach".

What emerges from the texts is a broad agreement that production management is concerned with the task of managing the process (or system) for the production of goods and services from the input resources which usually include labour, plant and machinery, materials and information. Johnson et al (1972), for example, defined operations management as "the design and operation of systems, including the application of those tools and techniques which are useful in achieving efficient and effective systems performance. Buffa (1976) stated

"Operations management is the management of productive systems" where productive systems are mechanisms for the creation of goods and services from the inputs of materials, labour, machines, facilities, energy, information and technology. Wild (1980) continued the systems theme and defined an operating system as a "configuration of resources combined for the provision of goods and services" and operations management as "concerned with the design and operation of systems for manufacture, transport or supply". Schroeder (1989) stressed the decision making activity and added " ... operations management is the study of decision making in the operations function". Muhlemann et al (1992) seems to be the only modern text that does not provide a definition of operations management. The authors contended that "of all the managerial tasks the production/operations management function is the hardest to define since it incorporates so many diverse tasks that are independent". However, their concern seems more to do with the nature of OM than its definition.

Recent trends

One of the major developments in the 1970s and 1980s was the introduction of the use of computers. The most significant application in operations has been the development and application of computerised Material Requirements Planning (MRP) to the control of materials,

components, subassemblies and finished products (Chase and Aquilano 1989).

The 1980s have also seen the acceptance and implementation of the "new" management philosophies of Just-in-Time and Total Quality Management. These are now the cornerstones of production practices in many manufacturing firms.

There has also been an evolution of operations management into a more integrative, strategic-oriented subject, less concerned with internal efficiencies and more concerned with effectiveness of its role alongside the other functions. Indeed, the subject has had recent liaisons with finance (for example Fitzgerald et al, 1991 on integrating operational measures of performance with financial measures), marketing (for example the link between operations and marketing, the customer interface, Bateson 1985, Brown et al, 1991) and organisational behaviour (for example the motivation and role of operations personnel in dealing with customers, Bowen 1985, Mills and Morris 1992).

The strategic-oriented role of operations has also been taken up in the development of the "manufacturing strategy" imperative. While acknowledging the key role of operations in *implementing* corporate strategy, several authors have argued strongly for the involvement of

operations in the *formulation* of strategies to provide a competitive advantage (see for example Hayes and Wheelwright 1984, Hill 1985, Skinner 1985 and Slack 1991).

What emerges from this brief historical review of operations management are two dominant views of operations:-

1) The "efficiency" role of operations management

Operations management has a predominantly inward looking role. It is primarily concerned with the internal efficiency of the operation; getting the most out of its resources. This view has, however, been tempered in the last few years with a somewhat more strategic and integrated vision of operations.

2) Operations management as a set of tools and techniques

Operations management is recognised as a set of tools and techniques that have been developed from its industrial engineering, scientific management and operations research past. The tools are predominantly concerned with supporting the efficiency role of the subject.

The emergent trend in management seems to be toward a more holistic, integrated view of organisational development. The adoption of the JIT and TQM production philosophies, to some extent, support and endorse this approach. Operations management, however, seems to be so encumbered by its past, both role and nature, that, as a subject, it might have difficulty in becoming integrated into a more total, multi- or cross-functional approach to organisational development in the next century.

One dimension of the subject which has been the focus of recent debate is the developing interest in service operations. The shared interest and development of this area with marketing, and to a lesser extent with human resource management and finance, might point the way in which the subject might develop in the future.

THE SERVICISATION OF OPERATIONS

Just as production techniques were applied to the building of the pyramids, so too, presumably, were they implemented in the development of services. Indeed it could be argued that service pre-dates manufacturing activities, for example the provision and distribution of food and child minding services. Over the centuries, service activities, like manufacturing activities, have developed from the home-base (where services are still found) through education and family-based welfare systems

to the more complex systems of local and national government, transportation and financial services that exist today. What is surprising therefore is that it has taken until the last few years before the operations management texts paid more than lip service to the provision of services as well as the production of goods. One reason for this would seem to be the factory/production historical base of the subject.

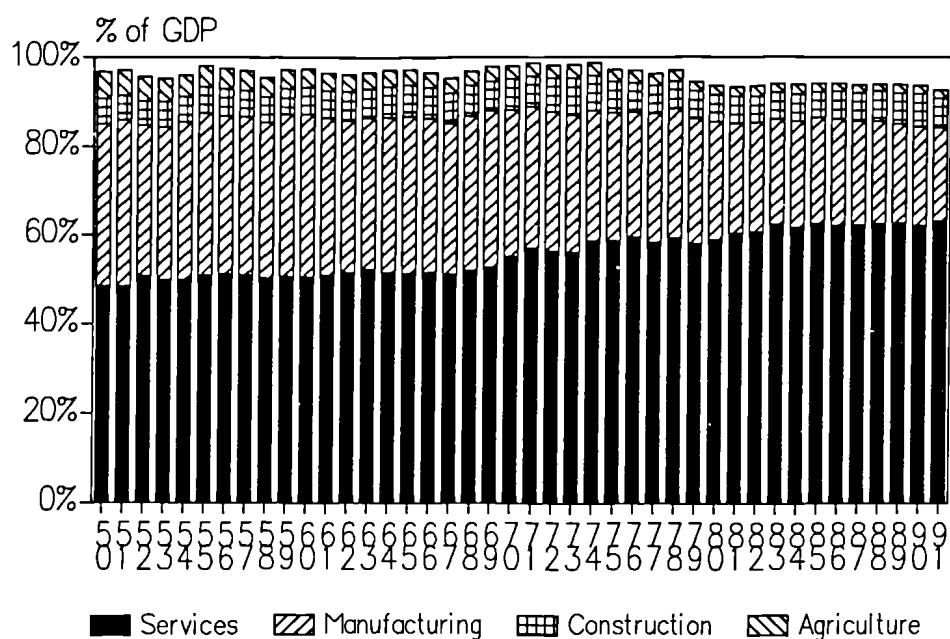
This section considers the increasing economic importance of service activities, the nature and meaning of service and how well service issues have been integrated into operations management.

The importance of service activities

Perhaps the most obvious reason for the increasing emphasis on service operations is the proliferation of service activities and their increasing economic importance (Haynes and DuVall, 1992).

Service industries have been defined as those activities included in sections six to nine of the Standard Industry Classification (Riddle 1986). Thus defined, the service sector is very diverse, embracing activities such as tourism, financial services, health care, catering and communications. The relative contribution of services to

the economy has been steadily growing over the last 40 years (see figure 2.1). By 1991 services accounted for nearly 64 per cent of UK gross domestic product (GDP). Since the mid 1970s services have grown at twice the rate of the rest of the UK economy. This expansion has been mirrored elsewhere in the developed world (Nicholls 1992). It could, however, be argued that the *actual* amount of service activity has not changed significantly but that, following divestment and dissection of manufacturing industries, the service contribution that used to be a part of manufacturing GDP, is now contained in the service GDP.



Annual Abstract of Statistics (1993)

Figure 2.1 UK gross domestic product 1950-1991

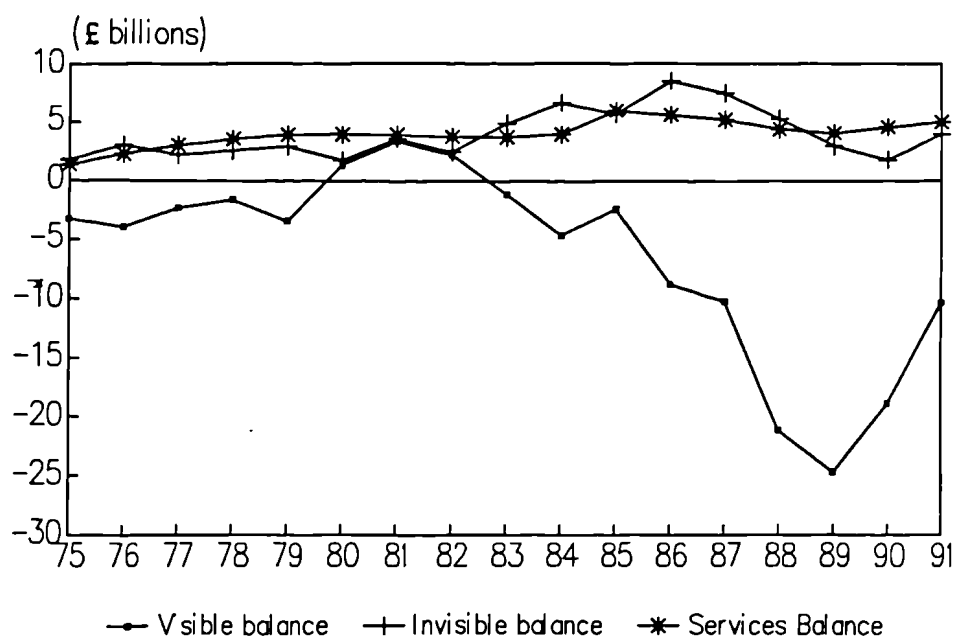
Employment too in services has risen, though maybe also for the reason above. Between 1981 and 1991 the working population as a whole increased by nearly two per cent. During this time employment in the production and construction and agricultural sectors fell by 23 per cent but there was an increase in service employment of 17 per cent, see figure 2.2. The figures may be distorted by part time jobs, of which there are many in the service sector, being counted as whole units.



Annual Abstract of Statistics (1993)

Figure 2.2 Employment trends 1975-1991

Some services such as finance and tourism increasingly support the UK's declining visible balance of payments see figure 2.3.



Annual Abstract of Statistics (1993)

Figure 2.3 UK balance of payments 1975-1991

Notwithstanding the distortions contained in the statistics, service industries are an important and growing sector of the UK economy. This is also the case in the rest of the western world (see for example Collier 1987 who called it the "Service Sector Revolution", or Nicholls 1992 who compared the service sectors of a number of western and eastern countries).

Service defined

It is somewhat surprising that, despite general agreement in the literature about the importance of the service economy and a broad acceptance of what constitutes a

service organisation, writers seem to be experiencing difficulty with the definition of service itself.

Haywood-Farmer and Nollet (1991) claimed that "Despite more than 25 years of study, scholars in the field of services management do not agree on what a service is. Indeed, instead of coming closer to a definition they seem to be less certain".

There have been two main debates about the meaning of "service". First, there is the question, are services different from goods? And, secondly, what then is "service"?

a) Are goods and services different?

Rathmell (1966), and many authors since, have maintained that the key differences between goods and services are that services are intangible (Bateson 1977, Shostack 1977, Sasser et al 1978, Berry 1980, Lovelock 1981), heterogeneous (Sasser et al 1978, Booms and Bitner 1981), produced and consumed simultaneously (Sasser 1978, Grönroos 1978, Carman and Langeard 1980) and are perishable (Sasser et al 1978).

Fitzgerald et al (1991) claimed that taken together, these four characteristics pose a unique set of problems for service managers. Lockyer (1986) refuted this in a parting polemic. He argued that the distinction between

service and manufacturing industries should disappear. He demonstrated that the frequently quoted "truths" of services, intangibility, heterogeneity, simultaneity and perishability, are equally applicable to the outputs of manufacturing operations.

This point is supported by Morris and Johnston (1987). However they contested that there *is* an important difference between what manufacturers process and what service operations process. Service operations usually, but not always, process customers. Service managers, therefore, have to deal with inherent variability and uncertainty caused by the physical, mental and emotional existence of the customer inside the operation. This is a type of variation not usually found in material (manufacturing) transformation processes.

This view was also supported by Normann (1991) who also questioned the validity of those frequently quoted "truths" of service. He preferred to consider the key opportunities to many service organisations provided by the "moment of truth" and the "personal intensity" of customer/staff interactions.

b) What is service?

The definitions of service contained in the literature stress the intangible nature of services. Zemke and

Schaaf (1990), for example, stated "A service is intangible it doesn't exist until it is called for by the recipient. It needs no shelf space, has no shelf life, and most certainly is not an asset that can be easily inventoried." Gummesson (1987) artistically defined a service as "something that can be bought and sold but which you cannot drop on your foot". Mattsson (1991) developed this by saying "services are the intangible side of consumption. They are embedded in a situation specific context called the service encounter" thus recognising the centrality of the encounter or service contact. The encounter theme is taken by Lindquist and Persson (1992) "service is action or interaction which occurs within a relationship".

Parasuraman (1985) neatly incorporated the intangible nature of services whilst implying the importance of customer expectations and perceptions "services are performances rather than objects". Wild (1980), from his operations management base, focused on the process and defined service as "the treatment of someone or of something belonging to them". Sasser et al (1978) concentrated on services as outputs "A service is a package of explicit and implicit benefits and facilitating goods produced in a supporting facility".

Haywood-Farmer and Nollet (1991) neatly summarised the problems that authors have faced in trying to define

service - "trying in a few words to describe 75 per cent of the economic activity of developed nations. Is it any wonder that there are exceptions for all definitions?"

The two key issues to emerge from the difference between goods and services and from the definitions provided in the literature are:-

- 1) the existence of the customer inside many service operations, and,
- 2) the importance, therefore, of the treatment/performance/intangible nature of service as seen by the customer.

These issues point to the criticality of service quality and service delivery as key concerns for service operations management. Walker (1990) explained "The challenge for service providers and their organisations (is that) mood, culture and timing as well as the customer's previous experiences all affect the way the service is perceived".

There is a need to pull together the operational delivery of service and match it to the customer's intangible needs. How well then has operations management responded to this challenge?

The integration of service into operations management

There seem to be two distinct ways in which "service" is being integrated into operations management. First there has been the application of the traditional manufacturing tools and techniques in service settings and secondly the application of service concepts to manufacturing situations.

The application of manufacturing tools and techniques to service

One of the first papers to be published applying manufacturing principles to service situations appeared in the Harvard Business Review in 1972. Levitt explored "the production line approach to service" in which he investigated how production thinking had been applied to great effect in McDonald's. The example he used, however, was a high volume, back office-oriented, standardised operation where production type assembly-line approaches are quite appropriate. This could be considered to be a major flaw as he attempted to put forward generalised approaches which may not be suited to the large number of more customised services. Furthermore, in a recent article Schlesinger and Heskett (1991) suggested "Production-line thinking cannot help traditional service companies like McDonald's that are now facing unprecedented pressure from new competitors".

They contested that people-based strategies are now more important than technologically driven ones. It is interesting to note that Quinn and Paquette in Bowen et al (1990) take a different view of the role of technology. They saw technology as being central in the development of service operations providing opportunities to decrease costs, improve productivity and add value to the service.

From the early beginnings in 1972, a good deal of literature has developed on the application of manufacturing tools, techniques and thinking to service operations for example:-

Hostage 1975	quality control in service operations
Sasser 1976	capacity management in service operations
Chase 1978, 1980, 1981	the separation of front office and back office and customer contact and efficiency
Matteis 1979	back office effectiveness
Lovelock and Young 1979	using the customer to improve efficiency
Maister and Lovelock 1982	designing facilitator services
Bowen and Schneider 1985	managing the customer as an operational input
Schmenner 1986	strategic development of service operations
Faulhaber et al 1986	the impact of information technology on service operations
Armistead 1986	quality assurance in service
Armistead et al 1988	service productivity
Reichheld and Sasser 1990	quality assurance
Haynes and DuVall 1992	process control in service operations
Bitner 1992	the impact of layout and environment

Surprisingly, these developments do not appear to have been successfully integrated into the operations texts. Schroeder (1989), for example, stated "material on service industries has often been 'tacked on' and not properly integrated with manufacturing topics". Maybe twenty years has been too short a time to overcome the manufacturing biases of operations management or the service applications have just not been substantial or robust enough to gain broad acceptance.

There has, however, been some integration. First, there has been some incorporation of service issues in the traditional operations texts, and, second there has been the creation of specialist service operations texts. This latter move may have been a back-lash against the general limited treatment of service issues by the main stream operations texts which seem firmly rooted to their industrial engineering, production-based past.

- a) The incorporation of service issues into the traditional texts

The first two operations texts to place some emphasis of the non-manufacturing and service sector were by Johnson, Newell and Vergin (1972) and Buffa (1976). Both of these books took the title Operations Management to distinguish them from factory or production management. Johnson et al explained the change in name - "production was

somewhat inappropriate because production means manufacturing to most people. Therefore a change in name is taking place - from production to operations management". Buffa claimed that his book was "conceived as a new book in the field designed to reflect the growing emphasis on the breadth of application of production management concepts and techniques .. (in).. non-manufacturing and service industries as well as manufacturing".

Their good intentions however, are not totally borne out by the content of their books. Johnson et al used the word "service" just once in chapter one. The remaining chapters revert to the discussion of primarily production management issues (based on the systems approach) including layout and location, production scheduling, inventory management, and quality control in manufacturing settings. There is, however, some discussion of mathematical programming applied to distribution systems and the scheduling of service and transportation systems. Buffa's first chapter recognised the growing importance of services and by 1976 their greater contribution to GDP than consumer goods. There is only brief consideration of the application of tools and techniques to services in the rest of the book. Many of his chapters, however, did acknowledge the existence of service activities and two short chapters are dedicated exclusively to service. These two chapters

focused primarily on the application of queueing theory, aggregate planning and scheduling in hospitals.

A number of authors (see for example Johnson, Newell and Vergin 1972 and Buffa 1976) have incorporated service organisations into the manufacturing processes terminology of project, job, batch, line and continuous operations. This approach has been strongly criticised by Chase (1978) who stated that these process types "are insufficient for diagnosing and thinking about (service) systems". Indeed several attempts have been made to create a typology of process types more suited to the analysis and understanding of service operations (see for example Chase 1981, Maister 1983, Maister and Lovelock 1982, Johnston and Morris 1985, Schmenner 1986, Haynes 1990, Wemmerlöv 1990 and Silvestro et al 1992).

Other traditional OM texts, in more recent editions, have tried to extend their service content by the addition of service examples and cases though their manufacturing pedigree still dominates. Hill, for example, in the 1991 edition of his text Production/Operations Management incorporated more service cases and examples. Muhlemann et al, in their latest edition (1992), made a brave attempt to include service issues. Their efforts fade away after page 140 when the thrust of the text returns to manufacturing for the remaining 328 pages. Some sections of which are entitled manufacturing systems

design, method study, manufacturing planning, inventory management, line balancing, linear programming and MRP I and II.

Examples of authors who have, in recent editions, more successfully integrated service operations with manufacturing would include Schroeder (1989) and Meredith (1992). Schroeder provides almost equal numbers of service and manufacturing cases and he uses many service examples. His language is also neutral in that he refers to operations not manufacturing or production, for example operations control not production control, work centres not machines, products and services not products. Though, disappointingly, his quality and inventory chapters are almost totally manufacturing oriented. Meredith's language too is neutral and he includes a significant number of service applications, examples and cases, and some service specific material throughout most of the text.

b) Specialist service operations texts

The first text which specialised in service operations management was by Sasser, Olsen and Wyckoff (1978). They took what was then a revolutionary approach to services and laid many of the foundation stones that have been built upon since, including identification of the importance of the service economy, the definition of

goods and services and the relationship between them, the service package and the service delivery system. They explored in some detail, accompanied by "Harvard-style" cases, issues of service design, service quality and capacity management. Fitzsimmons and Sullivan (1982) provided the next service operations text on the market. They took a more traditional systems view of operations and applied well known operations research techniques to service situations, for example linear programming and queueing theory.

These texts spurred an increasing academic interest in service operations matched by the realisation by many operations management teachers that most of their MBA classes comprised service managers not manufacturing managers as had been the case in years past. Several service operations texts soon followed (see for example Voss et al 1985, Collier 1987, Johnston 1988, Harris 1989, Murdick et al 1990).

It is interesting to note that there have been many cautionary notes raised about the application of manufacturing principles to service operations. Mills (1986), for example, lamented the tendency to impose, without caution, models that are appropriate to manufacturing firms onto service organisations. Davis (1983) was even more critical and he stated "using industrial models to manage service-based corporations

makes as little sense as using farm models to "run factories". This concern maybe a little myopic with the more recent development of operations management focusing more on the strategic and less on internal efficiency.

The application of service concepts to manufacturing

While traditional manufacturing concepts, tools and techniques were being developed and applied in service settings, the importance and relevance of "service" was being discovered by manufacturing. Furthermore, some tools and techniques which had been developed for service industries were being employed by manufacturing organisations.

a) The relevance and importance of "service" to manufacturing

Many manufacturing organisations believe that they now compete not on the quality, price or range of their manufactured goods but on the level and standards of *service* that they provide in association with their goods. Service provides many manufacturing organisations with their competitive edge. This theme is pursued by some recent authors, including Albrecht and Bradford (1990), Hart (1988), Martin and Horne (1992), Quinn, Dorley and Paquette (1990) and Quinn and Paquette (1990).

Quinn, Dorley and Paquette (1990), for example, argued that manufacturers are only able to have limited competitive advantages in terms of the goods. This is because recent activities in manufacturing, for example work study type activities and technology applications, have driven the cost of producing goods down and increased the range of goods available to the extent that price and range are less important as order winning criteria. Manufacturing organisations are recognising the importance of the services they add to their products; how the customer is treated and how the goods are provided. Speed of delivery through distribution channels and the quality of the service and support systems for example, are emerging as order winning criteria.

Jan Carlzon, chairman of Scandinavian Airline Systems (SAS) recognised this change "Increasingly unable to compete from a product-oriented advantage, the Western Economies are being transformed into 'service' economies. We are at an historic crossroad where the age of customer orientation has arrived, even for businesses that never before viewed themselves as service businesses" (Carlzon, 1987).

Sasser et al (1982) implied that the addition of sensual and psychological benefits to goods adds significant value to the customer's purchase. Such is the importance

of the value adding services and service-based competition that IBM, Digital, UNYSIS and Hewlett-Packard now regard themselves less as manufacturing companies but more as service companies creating and selling "solutions" to potential customers. Their offer consists of not only the hardware and software but also professional services, for example consulting, planning assistance, system construction and integration, implementation, project management, training and problem diagnosis (Martin and Horne, 1992). Martin and Horne concluded from their interviews with senior executives from 241 US-based multinational firms that there is a wide spread "attempt to move from previously product-dominated firms toward a service orientation".

b) The application of service concepts to manufacturing

While the mainstream texts applied traditional operations management concepts and techniques to service situations, other authors were implementing recently developed service approaches to manufacturing activities. Heskett (1987) explained how the "service vision" could be applied to manufacturing. Chase and Erikson (1988), Chase and Garvin (1989) and Chase (1991) described the workings of the "service factory" - the role of the factory in providing information, solving problems, enhancing sales and providing direct customer support. The need to infuse a service mentality into manufacturing

organisations is also described by Bowen, Seihl and Schneider (1989).

The emergent theme seems to be the recognition of the belief, long held by many service writers, that all organisations, whether service or manufacturing based do provide a combination of goods and services to the customer. The role of the operation therefore is to support not only the manufacture of the products but also the delivery of service. Sasser et al, for example, stated back in 1978 "almost all purchases of goods involve purchase of services and, conversely, almost all the purchases of services involve the purchase of goods, either directly by the consumer or by the producer of the service".

This mix of goods and services has been stated in some texts for some time. Sasser et al (1978), Hill (1983) and Voss et al (1985), for example, all make use of the goods/services continuum. Others have argued for the need to concentrate more on providing satisfaction to customers not just products or services (see for example Levitt 1969, Quinn and Paquette 1990).

What seems to be missing, however, is an operations perspective that adequately merges the manufacturing and service views, most texts and papers seem to take either a manufacturing or a service approach. One attempt to

merge these two views was taken by Johnston and Bryan (1993). They explored the product service relationship in a little more detail than most. They not only recognised that all offers are a mix of products and services but also proposed that the relative mix changes during the development of the offer. They used their model to expose mismatches between the view of the offer provided by the operation and that consumed by the customer in order to help managers develop means of achieving "total utility in the customer relationship". The key question, they proposed, is one of visibility. Is management aware of the nature of the offer it is providing at the point when it become visible to the customer and is consumed by him or her, and, is the visible offer supported by the organisation or is there a mismatch between what it believes it sells and what the customer buys.

SERVICE MANAGEMENT

During this twenty year period of growth of interest in service operations, other functional areas too were recognising the importance of a service context in their own fields, for example:-

Marketing - Bateson 1977, Berry 1980 and 1981, Cowell 1984, Lovelock 1984, Grönroos 1984b, Parasuraman et al'1985

Consumer behaviour - Wilkie, 1986, Hill 1986, Cadotte and
Turgeon 1988, Bolton and Drew 1991, Swan 1992

Human resource management - Schneider 1980, Czepiel,
Solomon and Surprenant 1985, Bowen and
Schneider 1985, Bowen 1986, Bitner and Booms
1990

Information technology - Collier 1985, Faulhaber et al
1986, Quinn and Paquette 1990

Accounting - Fitzgerald et al 1991, Brignall et al 1992

Economics - Riddle 1986, Quinn and Gagnon 1986, Nicholls
1992

The recognition of a mutual concern over similar issues
has, in the last few years, led to the creation of a
field that has become known as "service management".
Grönroos (1990) was one of the first to attempt to define
it. He stated "A service management perspective changes
the general focus of management in service firms as well
as manufacturing firms from a product-based utility to
total utility in the customer relationship". Service
management he claimed "has established itself as a
recognised field".

A number of texts have recently appeared that attempt to
bring together several functional views under the
umbrella of this new title of "Service Management". The
first book to take the title was by Normann (1984).
Others, with similar titles and intentions, followed in

the late 1980s and early 1990s. Two books explicitly attempted to capture the multi-functionality of service management. One by Lovelock (1988) was entitled Managing Services: Marketing Operations and Human Resources, and a second by Bowen et al (1990) entitled Service Management Effectiveness: Balancing Strategy, Organisation and Human Resources, Operations and Marketing. Other service management texts include Heskett (1986), Mills (1986), Jones (1989), Albrecht and Bradford (1990), Grönroos (1990b), Heskett, Sasser and Hart (1990), and Haywood-Farmer and Nollet (1991).

The proliferation of texts and research papers in this area (witness for example the introduction in 1989 of the second specialist service research journal, the International Journal of Service Industry Management) has been spurred by the increasing recognition of the importance of the sector, its inherent interest and attraction and maybe also a concern about its possible demise (see for example Quinn and Gagnon 1986, Davidow and Uttal 1989, Chase and Hayes 1990). Davidow and Uttal (1989) believed that a "service crisis is brewing. More sophisticated customers are demanding better service in order to cope with more complex products and services. Thanks to booming global competition, they have little loyalty and plenty of alternatives." Chase and Hayes (1990) warned that the service sector "is also, unfortunately, a sector whose trade surplus comprising

activities such as banking, engineering, transport, communication and a myriad of others, has plummeted over 60 per cent since 1985. America's trade in services is now barely in the black, and in mid 1989 it went negative for the first time. we have to get serious about service competitiveness ... our service industries should learn from the decline of the manufacturing sector".

The development of Service Management has not been an entirely good natured affair with some marketing researchers laying claim to the area by calling it Services Marketing (see for example Lovelock 1984, Eiglier and Langeard 1987, Berry and Parasuraman 1991). Indeed Eiglier and Langeard (1987) used the word "servuction" as the title of their text to capture the closeness of the marketing and operations activities in service organisations "il n'existe pas de mot équivalent à production pour exprimer le processus de création, de fabrication du service .. un néologisme est proposé, le term servuction, désignant le processus de création du service comment les services sont-ils fabriqués? et voir quelles conséquences en tirer pour le marketing; c'est tout le concept de servuction". Their book however, is subtitled "Le marketing des services".

Whilst undoubtedly much of the driving force for service management has come from marketing, it has not all been one sided. Significant contributions from the operations

field have included Shostack (1987), Collier (1987), Heskett et al (1990), Chase and Hayes (1990) and Howcroft (1992). From the human resource field contributions have come from Bateson (1985), Bowen and Schneider (1985), Czepiel (1985), Mills and Morris (1992) and Schneider (1980). Some recent work has been undertaken in costing in service industries by Brignall et al (1992).

The service management area seems to have more success in the last ten years in bringing together academics, from many disciplines and functions, to contribute to common management issues than operations management has done to integrate service operations into production management in twice as many years. It is that operations as a subject is just so entrenched in its factory and manufacturing base that it is unable or unwilling to move or does it not see service as an important issue? One suspects that the academics, from operations and elsewhere, who are researching into service issues, have found more support and encouragement from service researchers from other functional areas than from within their own subjects.

CONCLUSION

This chapter has traced the development of operations management from its industrial engineering and operations research base through the limited incorporation of

service issues in the 1970s to its association with service management in the mid 1980s. The emergent themes seem to be:-

- 1) Operations management's roots are deep in manufacturing. The subject has developed through the application of the scientific approach, systems theory and operational research techniques (see for example Lockyer 1962, Wild 1977, Chase and Aquilano 1973).
- 2) Operations management is primarily an inward looking function concerned with the efficiency and effectiveness of the operation (see for example Johnson et al 1972, Buffa 1976, Schroeder 1989).
- 3) From the 1970s there was an emerging recognition of the importance of the service economy. Following the application of some of the traditional techniques and approaches to service operations, the operations management texts moved to include a greater, though not substantial, element on service operations (see for example Buffa 1976, Chase and Aquilano 1973, Hill 1983).
- 4) There has been some concern expressed about the applicability of the traditional manufacturing tools to service operations (for example Chase 1978, Davis

1983, Mills 1986) and a growing recognition of the difference between manufacturing and service operations due to intangibility, heterogeneity, simultaneity and perishability (see for example Shostack 1977, Lovelock 1981) and the inherent variation created by the existence of the customer inside the service operation (Morris and Johnston 1987).

Operations management seems to have responded in three ways in the move toward a greater understanding of service operations:-

- 1) The main stream operations texts became somewhat more service oriented, with a greater emphasis on service examples and cases (see for example Meredith 1992, Hill 1991, Schroeder 1989).
- 2) Specialist service operations texts started to appear to compensate for the limited treatment of service in the mainstream texts for example Sasser, Olsen and Wyckoff 1978, Fitzsimmons and Sullivan 1982, Voss et al 1985, Collier 1987, Harris 1989, Murdick et al 1990).
- 3) Service operations found a willing home in the service management field. This is an emerging field that takes a wider view of managing service

organisations developed predominantly, though by no means exclusively, from the marketing area (for example Lovelock 1988, Bowen et al 1990, Mills 1986, Grönroos 1990b, Heskett, Sasser and Hart 1990, and Haywood-Farmer and Nollet 1991).

It appears that modern operations management has been struggling to come to terms with the "service revolution". The difficulties the mainstream operations function seems to be having in integrating service issues suggests that it is still very much an inward, efficiency-oriented manufacturing subject which does not seem to be able to cope with the more externally oriented, customer facing view of service. Maybe one of the ways ahead for management research might be to take the thematic view as has been taken by services management to unite researchers from many fields, to share literature and to learn from each other as well as limiting the number of times the wheel is re-invented.

Service management itself is certainly in its infancy. The immediate goal is then to systematise our knowledge acquisition. There are many service organisations which are "street smart" in their gathering and use of knowledge. There is a need to collect, describe and develop these activities to allow organisations to be "systematically smart" (Chase and Kellogg 1990).

The provision of quality, and in particular service quality, how organisations can satisfy customers, is the subject of this dissertation. Unfortunately it is a "service management" issue which therefore cuts across several functions. It is of interest to service operations managers who need to ensure that the operation delivers a quality service in order to satisfy customers. Services marketing wants to ensure that customers are attracted to purchase services from the organisation and to return after a satisfactory experience. Consumer behaviourists want to help managers understand how to satisfy consumer wants and needs. The next three chapters review each of these three areas.

Chapter 3

QUALITY

SUMMARY

The objective of this chapter is to review the operations management literature to identify and understand the developments that have taken place in quality management.

Despite general agreement that quality is an important competitive factor for many organisations, the operations management literature focuses primarily on the application of statistical techniques. These are concerned with the control of product characteristics to enhance the internal efficiency of the organisation rather than the support and development of a competitive advantage.

There are many quality definitions contained in the literature encompassing several perspectives including manufacturing, user and product. A number of quality characteristics have been proposed but there is little empirical support for them or agreement about them.

The statistical process control techniques that support the control of quality are well covered in the texts. Some recent texts include a more strategic view of quality, particularly through the inclusion of discussion of Total Quality Management.

Most texts are predominantly product oriented and there is little treatment of service quality in the operations management literature.

INTRODUCTION

The objective of this chapter is to review the operations management literature to identify and understand the developments that have taken place in quality management. Its purpose is first to set quality and service quality in an operations management context and second to highlight the need for a more strategic and service oriented approach to quality.

The first section identifies the importance of quality as a competitive factor. The second section reviews the definitions of quality and the characteristics that have been said to connote quality. Quality management; quality of design and conformance, is discussed in the third section. The reactive, prevention and total quality approaches are described in the fourth section. The fifth section contains an overview of the coverage of quality, the strategic approach and quality of service, in the operations management texts.

QUALITY: A COMPETITIVE FACTOR

There seem to be two views of quality as a competitive factor. Some authors contend that quality is the single most important competitive factor today. Others believe that it is just one among several factors.

Quality - the most important factor?

Out of all the ways in which organisations can compete, some authors contend that quality is the most important. Indeed Oakland (1989) sees quality as bringing about momentous change in industrial life, "The 'industrial revolution' took place in the last century. Perhaps the 'computer revolution' happened in the early 80s, but we are now, without doubt, in the midst of a 'quality revolution'". Feigenbaum (1986) claimed that "Quality has become the single most important force leading to organisational success and company growth in national and international markets". As a "quality guru" his making this statement will not surprise, however, like Oakland's contention, it is unsubstantiated.

One study that does provide some support for this view is the PIMS study into performance measurement and strategy. The authors of the report, Buzzel and Gale (1987), concluded that "In the long run, the most important single factor affecting a business unit's performance is the quality of its products and services, relative to its competitors".

Quality - just one competitive factor?

Presumably some organisations might attribute their growth and success to factors other than quality?

Success might have come as a result of their ability to produce at low cost, or their ability to design and develop new goods, services and production processes, or their ability to bring new products or services speedily to the market. Most authors would agree that there are many ways of competing, for example quality, cost, delivery speed, delivery reliability, flexibility, innovation, though there would be some argument about the definitions, meaning and number of criteria (see for example Porter 1980 and 1985, Kaplan 1983, Hill 1985, Fitzgerald et al 1991, Slack 1991).

Hill (1985), for example, argued that quality is just one competitive criterion, and furthermore, like all the other competitive factors, quality is at least a "qualifying criterion". As such quality must be attained to a certain level otherwise the company will have difficulty in competing, and indeed may fail in the market. In other circumstances quality may have been chosen, or transpires to be the "order winning criterion" as such it becomes the key competitive factor by which the organisation tries to secure new orders.

While the precise role of quality as a competitive criterion may be a bone of some contention, no author claims that it is unimportant. There is little doubt that quality, whether a qualifier or an order winner, in

the long term or in the short term, it is an important competitive factor to be managed.

WHAT IS QUALITY?

This section reviews the definitions of quality provided in the literature and those characteristics that connote quality.

Quality defined

There seem to be nearly as many definitions as there are people writing about quality. Garvin (1984) categorised the various definitions into "five approaches" to quality; the transcendent approach, the manufacturing-based approach, the user-based approach, the product-based approach and the value-based approach.

1) The transcendent approach

The transcendent approach views quality as "synonymous with innate excellence" (Garvin 1984) - the Rolls Royce compared to a Mini. Quality is seen to be absolute and uncompromising. As such it is also difficult to define. Garvin stated "This definition borrows heavily from Plato's discussion of beauty. In the Symposium, he argued that beauty is one of the "platonic forms" and therefore a term that cannot be defined."

2) The manufacturing-based approach

The manufacturing-based approach, sometimes called the producer definition of quality (Krajewski and Ritzman 1990), takes the traditional internally focused operations approach. Crosby (1979), for example stated that quality is conformance to specification, a view predominantly concerned with the internal monitoring of quality. This view is supported by others, Slack (1991), for example, stated "Quality is about making things right - not making mistakes, making products which are actually as they are supposed to be, products which are error free and always up to their design specification".

3) The user-based approach

The user-based approach incorporates many definitions which are based on, or similar to, Juran's "fitness for use" (Juran and Gryna 1980). Such definitions take a more customer oriented view showing some concern not only for the adherence to the specification but also with the appropriateness of that specification. Wild (1980), for example, defined quality as "the degree to which it (the product) satisfies customers' requirements". Deming (1986) defined quality as consistent conformance to customers' expectations. Oakland (1989), and therefore Muhlemann et al (1992), said quality is meeting customer

requirements, which Muhlemann et al explained as "the degree of satisfaction of customer needs ... the customer .. and his or her satisfaction must be the first and most important ingredient in any plan for success".

Feigenbaum (1986) stressed "the total customer satisfaction-orientation of quality". Buzzell and Gale (1987) said "quality is whatever the customers say it is, and the quality of a particular product or service is whatever the customer *perceives* it to be".

Garvin (1984) raised two questions that arise from the user-based quality definitions:-

- a) How can organisations aggregate widely varying individual preferences so that they end in meaningful definitions of quality at the market level?
 - b) Is quality the same thing as customer satisfaction?
- 4) The product-based approach

The product-based definitions view quality as a precise and measurable set of variables that are required to satisfy the customer. The following is quoted by both Muhlemann et al (1992) and Hill (1991), "the totality of features and characteristics of a product or service that bear upon its ability to satisfy stated or implied needs"

which is taken from BS4778. Feigenbaum (1986) extended this to "the total composite product and service characteristics of marketing, engineering, manufacture and maintenance through which the product and service in use will meet the expectations of the customer". This approach assumes that quality is an inherent characteristic of the properties of the good itself rather than something that might be ascribed to it. It also implies that the more characteristics a product has the greater its quality.

5) The value-based approach

Finally the value-based approach takes the manufacturing definition a stage further and defines quality in terms of cost and price suggesting that quality should be perceived in relation to price. Garvin (1984) argued that this definition "lacks well-defined limits and is difficult to apply in practice".

Some authors have attempted to combine some of these approaches. Wyckoff (1984), for example, merged the manufacturing- and user-based views in his definition "the degree of excellence intended and the control of variability in achieving that excellence, in meeting the customer's requirements". Garvin (1984) reconciled three of the approaches to quality. He suggested that "The characteristics that connote quality must first be

identified through market research (a user-based approach to quality); these characteristics must then be translated into identifiable product attributes (a product-based approach); and the manufacturing process must then be organised to ensure that products are made precisely to those specifications (a manufacturing-based approach to quality)".

One could include the role of finance and marketing. This would ensure that the costing and pricing of the product is such as to ensure that customers believe that they receive value for money (a value-based approach). Operations strategists would argue that the flow of the argument above should not be uni-directional and that it is pointless to create a specification that either the operation is unable to meet, or that it can meet but at a price which does not provide the customer with perceived value.

The characteristics of quality

The operations texts are disappointing in their treatment of the characteristics of quality, certainly when compared to the service quality literature (see chapter four). Muhlemann et al (1992), like Schonberger (1985), do not provide a set of characteristics but occasionally refer in passing to examples such as the tolerance of an item, the degree of finish on a surface, the smoothness

of movement of a mechanical device, a particular chemical property and the number of times a telephone rings.

Krajewski and Ritzman (1990) summarised the product and service quality characteristics into three categories, hardware (style and appearance of equipment or the product, ease of installation and use), product or service support (responsiveness, accuracy, truthfulness) and psychological impressions (courtesy, sympathy, knowledge and reputation). In their quality control chapter (which includes acceptance sampling and statistical process control) they do not refer to these categories and select examples including the number of defective radios and wheel rims, dimensions of holes, cylinder head measurements and the diameters of screws.

Hill (1991) in his chapter on quality control, having defined quality as "the totality of features and characteristics of a product or service that bear upon its ability to satisfy stated or implied needs" spent little time on these and summarised them in one short table. He identified four typical aspects of a specification; function, product/service characteristics, performance and reliability. He described the function of a product as doing what it is supposed to and the function of a service "a statement of what the service entails" including the "less tangible statements" though he declined to define these. His product/service

characteristics are the physical characteristics; variables such as dimensional characteristics and attributes such as surface finish, and for services "what constitutes the service" which he stated may be separated into variables and attributes, but he does not enlarge upon this.

Oakland (1989) defined quality as meeting customer requirements and that "the requirements may include availability, delivery, reliability, maintainability and cost effectiveness among other features".

Juran et al (1988) suggested five characteristics; technology (for example strength and hardness), psychological (for example taste, beauty, status), time-oriented (for example reliability and maintainability), contractual (for example guarantee provision), and ethical (for example courtesy of sales personnel, honesty).

Garvin (1984) provided eight dimensions of product quality; performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality. Performance he claimed is a combination of the user-based and product-based approaches and is concerned that the product meets a certain set of "primary operating characteristics"; handling, cruising speed and comfort for a car for example. Features are the

secondary characteristics, supporting or enhancing features that supplement the primary characteristics. Serviceability he defined as the speed, courtesy and competence of repair - the servicing of the product. Perceived quality recognises the fact that customers do not possess complete information about a product's attributes and that it may be more a function of their images and brand names.

Schonberger and Knod (1991) added a few more dimensions to Garvin's list to represent their view of additional service dimensions; value, responsiveness, humanity (sensitivity, courtesy, communication, understanding) security and competency.

Reliability has been referred to by several authors. Reliability, defined by Muhlemann et al (1992) as the ability of a product to function satisfactorily over a period of time, some would argue is not a quality characteristic. Wild (1980), for example, argued that it is a result or consequence of quality not a characteristic of quality itself. Muhlemann et al (1992) treated reliability separately and argued that it ranks equally with quality in importance in terms of competitive criteria.

There are two issues that emerge from the operations literature on defining quality:-

- 1) The various definitions of quality, reported in the operations literature, seem to be related to the different functions and disciplines of management. Garvin (1984) noted that there is "a host of competing perspectives, each based on a different analytical framework and each employing its own terminology". He continued, "Philosophy has focused on definitional issues; economics on profit maximisation and market equilibrium; marketing on the determinants of buying behaviour and customer satisfaction; and operations management on engineering practice and manufacturing control". What seems to be missing is a view which unifies and combines these approaches into a universally acceptable definition of quality. Is this because management research is, by its very nature, parochial, or are the different views of quality unreconcilable?
- 2) The literature on the characteristics that connote quality, those features that give the word "quality" meaning, seem to be disparate and incongruous. What seems to be missing from this "menu-based" approach is a conceptual and empirical underpinning of the characteristics.

It is not surprising that Krajewski and Ritzman (1990) concluded that "it should be apparent that defining quality is no easy task".

QUALITY MANAGEMENT

Quality management, referred to by some authors as quality assurance, encompasses all activities and functions concerned with the attainment of quality (Hill 1983). Most authors split these activities into two; quality of design and quality of conformance. Schroeder (1989) is an exception to this. He identified six separate activities which he referred to as the quality cycle:-

- 1 define quality attributes
- 2 decide how to measure each attribute
- 3 set quality standards
- 4 establish an inspection programme
- 5 find and correct causes of poor quality
- 6 continue to make improvement

The first three steps are associated with quality of design and the last three with conformance quality. The texts vary little in their treatment of these two areas.

Quality of design

Wild (1980) espouses the traditional inward focused view of design quality. He defined it as being "determined by the specification of the product, for example the tolerance placed on dimensions, the composition and treatment of materials, finishes etc". The main outcome of this activity is, as far as the operation is concerned, the creation of a quality specification - this describes or defines the product or service and should be a comprehensive statement of all aspects of it which must be present to meet customer requirements (Muhlemann et al 1992).

It is maybe not surprising that having difficulty with either defining or agreeing on the characteristics of quality most operations texts spend little time on the area of quality of design. Hill (1991) covers quality of design in more detail than most. In not quite giving up this role to marketing he asserted that "Although the quality of a product/service is determined by the market need, (operations) management is responsible for establishing the appropriate quality levels for its products/services". Hill investigated the cost/value relationship and uses failure mode and effect analysis (FMEA) to identify the weak points "at the development stage of a product".

Muhlemann et al (1992), take a more outward-looking approach and explicitly recognise the interfunctionality of this task and define quality of design as "an interactive process whereby the customer, and marketing, sales, product or service designers, purchasing, supplies and operations ... work together to develop a service or product that meets customer expectations and can be generated or produced economically". Oakland (1989) in his TQM text continued the "meeting customer expectations" theme and contended that the main purpose of quality of design is to ensure that the product or service will be able to achieve its intended purpose. He cited several examples including "the beautifully presented gourmet meal will not necessarily please the recipient if he or she is travelling on the highway and has stopped for a quick bite to eat". Oakland stressed the operations role here "It is not sufficient that marketing specifies the product or service, 'because that's what the customer wants'. There must also be an agreement that the producing departments can achieve that requirement. Should they be incapable of doing so, then one of two things must happen, either the company finds a different position in the market place or substantially changes the operational facilities."

This view is critical in understanding the link between the user-based approach to quality and the operational (manufacturing-based) view of quality. Discovering where

an organisation does not meet customers' needs and expectations and then devising strategies to deal with it are key activities for managing quality.

The operations texts, however, spend most of their time on conformance quality and in particular the techniques of quality control.

Quality of conformance

Quality of conformance means producing a product to meet the specification. When a product conforms to the specification it is deemed by operations to be a "quality" product even though the quality of design may be "low" (Schroeder 1989). The main task of conformance quality is the control of quality. This is the task on which most operations texts concentrate.

Quality control is defined as the task of preventing poor quality products from leaving the plant (Harris and Gonzalez 1981). Schroeder (1989) takes a more long term and proactive view and stated "quality control is aimed at continuous improvement of a stable process" primarily through statistical process control which tries to separate assignable causes from random ones and continuously removing causes of error through inspection to detect errors and find the causes of those errors.

Most texts thoroughly demonstrate their operations research and quantitative backgrounds by explaining, in some depth and detail, acceptance sampling, sampling risks, and statistical process control.

This approach is not too surprising given the quantitative nature and background of operations management. However, it does seem somewhat perverse that the texts should concentrate on control when there is little agreement on the characteristics that they are supposed to be controlling. Further, one might argue that some of the "softer" characteristics identified earlier, for example sympathy, reputation, knowledge, taste, beauty and status, do not readily lend themselves to such treatment.

APPROACHES TO QUALITY MANAGEMENT

The ways operations management has approached the task of managing quality has changed over the last few years from the "traditional" reactive approach, through a more prevention oriented or proactive approach to the more recent strategic, or total quality management, approach.

Traditional quality management

The objective of the traditional reactive or detection orientated approach (see for example Wild 1980) is to

support conformance quality, that is to check that work completed in one part of the process meets its specification and to try to prevent any defective work being passed on to the next stage in the process. This relies heavily on inspection procedures of input items, processes and outputs, undertaken by a dedicated team of quality specialists using recognised tools and techniques, for example sampling techniques, sampling plans, vendor rating and acceptance sampling. The dedicated teams are sometimes located outside the operations function. The justification for this approach is that it is wasteful to allow time and materials to be invested in products which are not always saleable (Muhlemann et al 1992).

This approach requires the creation of acceptable quality levels (implying some poor quality is acceptable) and accepts that there is an optimum amount of quality effort at the point at which the costs of quality prevention and appraisal and the cost of defectives is a minimum. This optimum point can be calculated by the apocryphal application of differential calculus to the two conflicting costs of quality (which assumes that as quality effort expands the costs of failures will decline and the costs of assuring quality, prevention and appraisal, will rise), see figure 3.1 taken from Wild (1989).

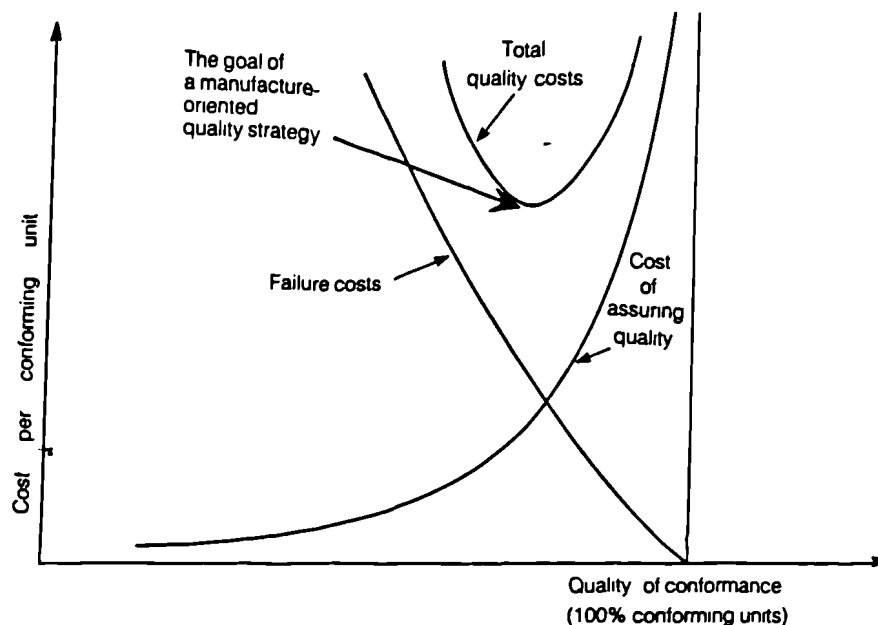


Figure 3.1 The optimisation of quality costs

The traditional approach has many detractors. Garvin (1987), for example, criticised it "as purely defensive measures to prevent failures or eliminate defects. What managers need now is an aggressive strategy to gain and hold markets". Slack (1991) argued against the traditional view of quality costs and said that the approaches to find the optimum quality effort point are "misleading". This approach assumes an optimum exists (that is not zero defects and perfect quality) and, furthermore, that the costs of failure are difficult to calculate and their longer term impact is unquantifiable.

The prevention approach

One suspects that the change from the traditional approach to the preventative approach has been driven by a management concern about the high cost of quality, in

particular the high cost of poor quality. Schroeder (1989) shrewdly observed that "Since managers speak the language of money, putting quality in cost terms offers a powerful means of communication and control".

Crosby (1979) contended that many organisations do not know how much they spend on quality, putting it right or getting it wrong. He claimed that organisations that have measured their costs claim that they equate to about 30 per cent of sales. Juran (1989) estimated that total quality costs in manufacturing average ten per cent of sales turnover and Feigenbaum (1986) suggested the ideas of a "hidden plant" in every organisation that uses, to no benefit, one tenth of productive capacity.

The prevention approach takes a more proactive approach to quality and quality costs. It is characterised by "getting things right the first time" (Gummesson 1987). Gummesson likens the process to the formation of a river with many tributaries and streams that may pollute the sea of customers if mistakes happen. The prevention approach tries to move away from the notion that errors are a normal and acceptable part of everyday life. As Schroeder (1989) stated "We are conditioned to expect errors in the work place, but not in other forms of human activity. For example, when we attend a concert we do not expect the soloists to play a certain percentage of bad notes". The first step, as Teboul (1991) noted is to

"reverse these paradigms and inevitabilities, and instead aim at zero defects, zero breakdown, zero inventory, zero delay, zero paper - all without increasing costs"

The objective of the prevention approach is to try to allocate resources so as more often to make products or services right the first time (Hill, 1991). Muhlemann et al (1992) developed this point "it is much more effective to avoid waste by not producing unsaleable output in the first place (but to) adopt a strategy of prevention" which is often captured in slogans like "right first time" or "zero defectives". Crosby (1979) is perhaps the best known for a zero defects programme. This is summarised in his absolutes of quality management and his 14 quality steps:-

CROSBY'S FIVE ABSOLUTES OF QUALITY MANAGEMENT

- 1 Quality is conformance to requirements
- 2 Prevention not appraisal
- 3 The performance standard must be Zero Defects
- 4 Measure the price of non-conformance
- 5 There is no such thing as a quality problem

CROSBY'S 14 STEPS

- 1 Establish management commitment
- 2 Form interdepartmental quality teams
- 3 Establish quality measurement
- 4 Evaluate the cost of quality
- 5 Establish quality awareness
- 6 Instigate corrective action
- 7 Ad hoc committee for the zero defects programme
- 8 Supervisor employee training
- 9 Hold a Zero Defects day
- 10 Employee goal setting
- 11 Error cause removal
- 12 Recognition for meeting and exceeding goals
- 13 Establish quality councils
- 14 Do it over again

The prevention approach takes quite a different view of the relationship between the costs of quality compared to the traditional approach. In particular, it concentrates on the difference between appraisal and prevention costs, not only checking it is right (appraisal) but also making it right first time (prevention) (Muhlemann et al 1992). This has resulted in a new quality cost model, though a little slow to reach the texts, which contends that total costs become a minimum at the point of zero defects, figure 3.2 which is taken from Schonberger and Knod (1991) and Harrison (1992).

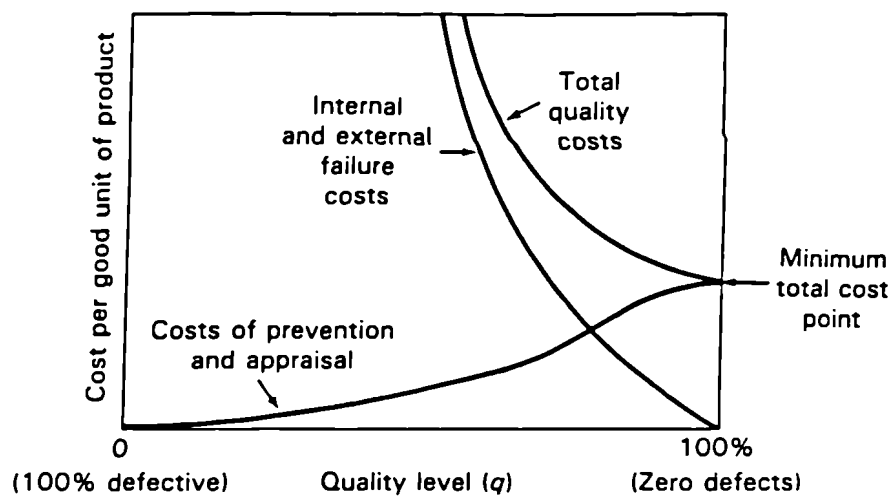


Figure 3.2 Optimal quality costs and zero defects

Total Quality Management (TQM)

While both the reactive and proactive approaches fit with the traditional inward looking role of operations management, Total Quality Management (TQM) is a more strategic, outward looking approach.

Total Quality Management "is probably one of the most significant of the new ideas to sweep across the manufacturing scene over the last few years" (Slack, 1991). TQM is an attempt to move the focus of quality away from just being a manufacturing activity into a major concern for the whole organisation. Deming, considered to be the father of quality control in Japan, asserted that quality starts with top management and is a strategic activity (1982 and 1986). It is claimed that much of the success in terms of quality in Japanese industry was the result of his lectures to Japanese companies in the 1950s (Oakland 1989). Deming's basic philosophy is that quality and productivity increase as variability decreases. Deming is a great advocate of statistical control methods, though he also takes a wider approach in his 14 points, emphasising participation, education, openness and purposeful improvement.

DEMING'S 14 POINTS

- 1 Create constancy of purpose
- 2 Adopt new philosophy
- 3 Cease dependence on inspection
- 4 End awarding business on price
- 5 Improve constantly the system of production and service
- 6 Institute training on the job
- 7 Institute leadership
- 8 Drive out fear
- 9 Breakdown barriers between departments
- 10 Eliminate slogans and exhortations
- 11 Eliminate quotas or work standards
- 12 Give people pride in their job
- 13 Institute education and a self improvement programme
- 14 Put everyone to work to accomplish it

Juran was also a key educator of the Japanese in quality management though he was not discovered by American business until the early 1980s (Krajewski and Ritzman (1990)). He first coined the term fitness for use. His intention was to try to move away from the traditional manufacturing-based view of quality as "conformance to specification" to the more user-based approach. He pointed out that a dangerous product could conform to specification but would not be fit to use. Oakland (1989) claimed that Juran was one of the first to deal with the broader aspects of management of quality. In the 1940s Juran believed that the technical aspects of quality control had been well covered and a more broad perspective was required. One suspects that Oakland would be the first to agree that they may have been well covered but they are not well practised! Like Deming, Juran was concerned about management activities and responsibility for quality, but he was also concerned

about the impact of individual workers and involved himself to some extent with the motivation and involvement of the workforce.

The introduction of TQM

TQM as a concept was introduced by Feigenbaum in 1957. He defined Total Quality Control as "an effective system for integrating the quality development, quality maintenance and quality improvement efforts of the various groups in an organisation so as to enable production and service at the most economical levels which allows for full customer satisfaction" (1986).

Ishikawa, based on work of Deming, Juran and Feigenbaum, has been credited with originating the concept of quality circles and fishbone (cause and effect) diagrams (Krajewski and Ritzman (1990). Ishikawa (1972 and 1985) claimed that there had been a period of over-emphasis on statistical quality control (in Japan), and as a result people disliked quality control. They saw it as something unpleasant because they were given complex and difficult tools rather than simple ones. Furthermore, the resulting standardisation of products and processes and the creation of rigid specification of standards became a burden that not only made change difficult but made people feel bound by regulations. Ishikawa saw the worker participation as the 'key to the successful

implementation of TQM. Quality circles, he believed, were an important vehicle to achieve this. Despite his broad approach to quality management it is somewhat surprising that he called his most recent book (1985) What is Total Quality Control not Total Quality Management with its implicit emphasis on conformance to specification. Maybe something was lost in translation from the Japanese?

For completeness, one should also mention Taguchi whose main concern was with engineering-in quality through the optimisation of product design combined with statistical methods of quality control. He encouraged interactive team meetings between workers and managers to criticise and develop product design (Krajewski and Ritzman, 1990).

The difference between TQM and the proactive approach

The main difference between the proactive approach to quality and TQM is the word "total" (Slack, 1991). TQM is a total involvement in quality as Slack explained "Total means all parts of the organisation based on one of the more powerful aspects to emerge from TQM, the concept of the internal customer and supplier. This provides the recognition of the interconnected flow of activity through an organisation whose eventual aim is in fulfilling the needs of the external customer. Total meaning everyone in the organisation, recognition of the

effect on quality that everyone has through the internal customer-supplier links."

Many authors, Slack (1991) and Ishikawa (1985) for example, stressed the philosophical nature of TQM rather than that of a programme with an identifiable beginning, a finish date and a clear attainable objective. TQM is a never ending process of improvement with an unattainable goal - perfect quality. IBM for example, do not call their TQM activity TQM but CIP - Continuous Improvement Programme.

Muhlemann too stressed the total involvement philosophy of TQM. He said TQM "is a way of managing to improve the effectiveness, flexibility and competitiveness of a business as a whole. It involves whole companies getting involved in each department, each activity, and each person and each level. For an organisation to be truly effective, every single part of it must work properly together, because every person and every activity affects and in turn is affected by others". Muhlemann also added a concern about the impact of internal services on the end product. "It is worthy of mention that the first point of contact for some outside customer is the telephone operator, the security people at the gate or the person in reception... clearly TQM cannot be restricted to the 'production' or 'operational' areas without losing opportunities to gain maximum benefit".

TQM has been referred to as "quality at source" see for example Krajewski and Ritzman (1990), stressing the individual responsibilities for quality at all places (sources) in an organisation.

Ishikawa (1985) argued that TQM is nothing new. It is a way of thinking and a set of activities that simply represent good management practice. Though as Ishikawa noted, its implementation seems to require a "thought revolution in management".

The TQM approach

The main sources of inspiration for the TQM approaches are the "quality gurus" for example Deming (1982 and 1986), Juran (1989), Ishikawa (1985) and Crosby (1979). Oakland (1989) reflected on their approaches and claimed "many gurus appear to present different solutions to the problems of quality management and control. In reality they are all talking the same 'language' but they use different dialects".

In essence the main theme of TQM is that of a user-based approach which is intent on satisfying the needs of the customer. The activities that are required to support this encompass top management commitment, improvement

activities, training, control, creation of systems and procedures, involvement and participation.

The three key factors identified by Deming, Crosby, Ishikawa and Juran are:-

- 1) top management commitment
- 2) involvement throughout an organisation
- 3) the use of appropriate statistical tools

Muhlemann et al (1992) stated that there are three major components of TQM approach:-

- 1) a documented quality management system
- 2) statistical process control
- 3) team-work for quality improvement

All three, Muhlemann et al contested, require an uncompromising commitment to quality. This must start with top management who are the spearhead to drive TQM through the organisation.

More recently Oakland (1989) has provided his own twelve points:-

understanding	system
commitment	capability
organisation	control
measurement	team-work
planning	training
design	implementation

Oakland, like Slack (1991), believed that the key to TQM is in the understanding of quality chains. These are the chains that link the internal providers to each other, and to the external supplier and customer. Figure 3.3 is the diagram from Oakland which depicts this process.

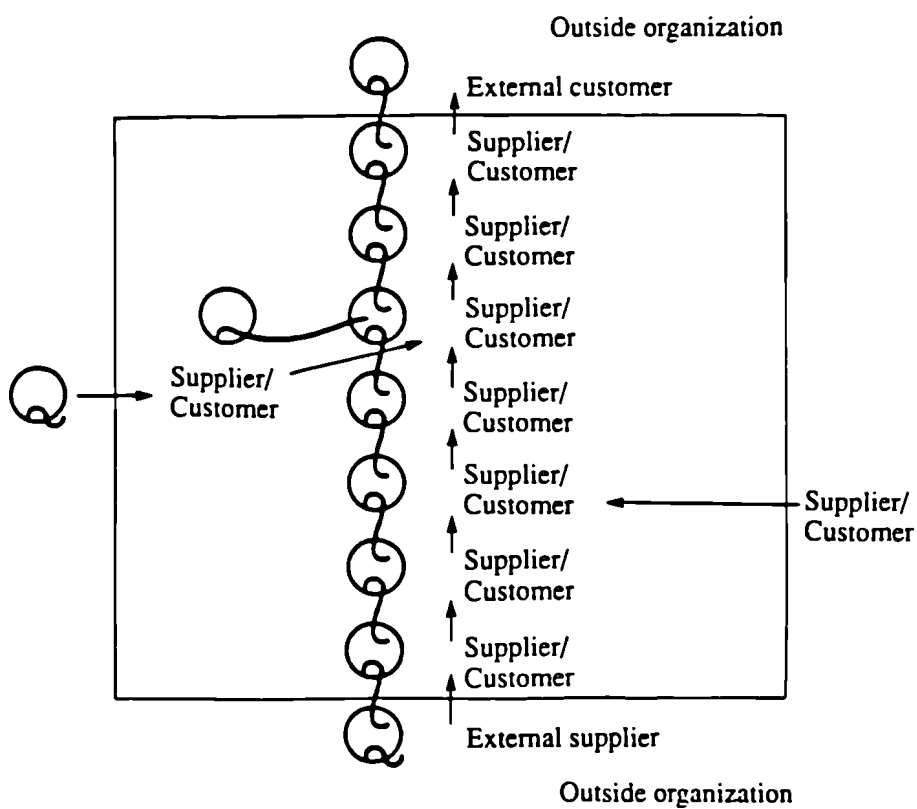


Figure 3.3 Quality chains

This chain of customers/suppliers is the essence of TQM but the picture belies the complexity. In the creation of final products and services there are usually a myriad of activities and functions which are not normally so clearly related as the simple diagram depicts. Each activity too, may have many different customers and many different suppliers. The relationships are complex, at different levels, and certainly not straight lines. The principle however is clear, with the concept of everyone having to do his or her bit right, right in terms of meeting the requirements/needs/expectations of *his or her* customers. Any one failure in any one place in the network and there may be significant ramifications for the rest of the organisation, and its external customers. "The interesting point is that this failure usually finds its way to the interface between the organisation and its outside customers, and the people who operate at its interface" Oakland (1989).

What emerges from the operations management literature is a significant change in the view of the task of managing quality. Most texts now cover, to some extent, the three approaches described above. What is interesting is that almost without exception, they all still give most time to the application of statistical quality control techniques. Is this because, though there is a broad agreement about the "new" quality philosophies, how to implement and control them is still not known? Or,

having paid service to the new approaches, the view of the operations task is that of controlling the process and not contributing to, or being involved in, the strategic development of the organisation?

What seems to be missing in the literature, particularly on TQM, that is not missing in the traditional approach, is the answer to the question so what do we do tomorrow? TQM is a seemingly sensible philosophy but its implementation is not dealt with in detail unlike the traditional statistical control techniques. TQM might be seen as a vehicle for bringing the various views and approaches to quality together, but it does not seem to have succeeded as yet.

QUALITY: AN OPERATIONS MANAGEMENT PERSPECTIVE

It will be no surprise that Schroeder (1989), like many other OM authors, believes that quality, of products and services, is one of the key objectives of operations management. There is a "recognition that operations must help the firm achieve a competitive position in the market place .. (and) lend some competitive strength to the business" (Schroeder 1989).

What emerges from the literature, however, is:-

- 1) a view that operations texts appear to concentrate on the application of operations research techniques to the internal production process.
- 2) that despite the importance of both goods and service quality, the operations texts have a predominantly product orientation.

Quality - an internally focused task

The traditional texts provide only limited treatment of *quality management* (how operations can support and improve a firm's competitive position). Schroeder (1989) expressed some concern about this, "since operations is so vitally involved in quality, it is somewhat surprising that the subject of quality management has been given only cursory treatment in the literature of operations management".

The literature does however, cover *quality control* (the application of statistical techniques to the internal control of quality to specification) in some depth. A glance at Buffa's foundation texts on operations management (1969 and 1976) reveals that they do not include sections on quality (either management or control). Johnson et al (1972) included discussion of

quality control techniques in a section entitled Statistical Control Models. More recent texts by other authors do, however, include sections on quality, but many of them are concerned more with quality control than quality management (see for example Chase and Aquilano 1973, Wild 1980, Hill 1983, Chase and Aquilano 1989, Evans et al 1990).

Many of the texts seem to add support to the view of operations management as the application of operational research techniques to achieve internal operational efficiency. As Schroeder (1989) stated, operations management seems to have a "preoccupation with formulas, statistics and qualitative methods".

There has, however, been a shift in emphasis in some of the more recent texts toward the support and development of a competitive advantage (see for example Schroeder 1989, Krajewski and Ritzman 1990, Muhlemann et al 1992, Meredith 1992). These texts include material not only on the traditional quality control techniques, but also on wider improvement activities, for example continuous improvement techniques, prevention of defects, quality programmes, Japanese approaches, total quality management, quality award schemes, and quality functional deployment.

Haynes and DuVall (1992) attributed much of the impetus for this change as coming from the published literature stemming from work associated with Japan's industrial rebirth after the Second World War. "The foundation of these programmes was qualitative assessment of product characteristics in an effort to reduce the degree of variation in the final output" which have been developed into the new concepts and philosophies of Total Quality Management TQM, Total Preventative Maintenance (TPM) and Just-in-Time (JIT) (Haynes and DuVall, 1992).

If Haynes and DuVall are correct in their assertion that the impetus began soon after World War II, it is somewhat surprising that this material is only just beginning to surface in the operations management texts.

Quality - a product orientation

The operations management authors give little time to the management of quality of services (see for example Wild 1980, Schonberger 1985, Schroeder 1989, Krajewski and Ritzman 1990, Muhlemann et al 1992). While most authors do discuss quality of services in the opening sections of their chapters on quality, their main mission seems to be the application of quality control techniques to products. Schonberger (1985), for example, dedicates 26 lines on his chapter on quality management to "quality of service" in which he questions the usefulness of the

traditional quality tools and techniques in the service sector. Schroeder's excuse (1989) is that quality is generally more difficult to define for service than for manufactured goods. However, this contention is not supported by the various definitions of quality, most of which referred specifically to services, or to the multitude of characteristics, many of which are concerned not just with the product, but with service.

Hill (1991) is one exception. He spends a few pages exploring the elements of the service package and identifying particular factors that might be important to them, for example the layout and interior appointment of the supporting facilities, the availability of the explicit services and the range of the facilitating goods. He makes suggestions for the design and control of service levels using established customer contact ideas (without reference to Chase, 1978 or 1981) and to service process control (without reference to Shostack, 1984 or 1987, or Johnston 1987). He reproduces some examples from one of the first TQM papers in service (Wyckoff, 1984) which pre-dates this edition of his book by some seven years.

Nicholson is one traditional operations management academic who attempts to take a service perspective in his chapter entitled "Measuring Customer Service and Managing Delivery" (in Wild 1989). In this chapter he

commented that customer service includes aspects of range, design initiative/innovation, price, delivery, quality and service. Although Hill and other operations strategy writers would maintain that these are generic strategic performance criteria. Nicholson does identify a number of quality factors from a customer's point of view but without clearly relating them to his concept of customer service. The bulk of his chapter is concerned with delivery performance.

Teboul's recent addition to the literature, though not an operations book like the others, is entitled Managing Quality Dynamics (1991). In it he devotes two whole chapters to quality in services. In the first he defined service and develops the characteristics of services. The second chapter provides some characteristics of service quality based on the work of Grönroos and Parasuraman et al (see next chapter). Teboul stressed the need to manage expectations both during the provision of service and before the service encounter to try to minimise the quality gap in the minds of customers.

Even the specialist service operations management texts are limited in their treatment of quality of service. Murdick et al (1990) for example, do take a more customer oriented approach than the mainstream texts. However, they reproduce the various definitions of quality and quickly revert to the application of statistical control

techniques, in particular the application of control charts to defects!

TQM, as a more strategic and outward focused activity might be one area where the OM literature might be more successful in looking at the quality of service. This, however, does not seem to be the case. Schroeder's chapter on TQM (1989) is product oriented though he does provide an example of the application of quality circles at American Express. Meredith's TQM section (1992) refers to products. He does, however, provide one page on "Quality in Services" which he starts by stating "measuring service quality is difficult". Maybe this statement belies the true nature of operations management academics; if they can't apply statistical quality control they don't spend much time on it.

One exception is a paper by Wycoff (1984) which considered two service organisations and how they have improved their service quality. He likened the approaches take by these two organisations to TQM and succeeded in applying statistical process control and fishbone analysis to a restaurant.

The operations literature on quality provides convincing evidence that operations is an inwardly focused subject whose primary task is applying the operations

research techniques of statistical process control to products.

Though much of the literature does recognise the importance and existence of service, the operations quality literature is still quite product dominated. The reasons for this might be:-

- 1) that authors believe there is no difference in the ways service need to be defined and controlled
- 2) they are unable or unwilling to apply the statistical tools to service quality characteristics
- 3) there is a lack of understanding of the nature and management of services.

CONCLUSION

Quality is one of the competitive performance criteria for both the manufacturing and service sectors of the economy. It is also recognised as a key task for operations managers.

The OM view of the quality task however seems to be dominated by a product orientation and a concern about the control of the operation to gain internal efficiencies. Much of the literature is almost

exclusively devoted to the quality of tangible goods defined in terms of conformance to manufacturers' specifications (Zeithaml et al 1990) despite the recognition of the importance of service and the acceptance of user-based definitions of quality.

There has been a movement in the literature away from detection and control based on an internal efficiency oriented focus to a more proactive and prevention oriented approach. This has evolved, over the last ten years or so, into an involvement with the implementation of a more strategic TQM approach.

There seem to be five gaps in the operations-based quality literature:-

- 1) There is a lack of consensus about the definition of quality which would serve to bring the various views of quality together (see for example Garvin 1984, Wyckoff 1984, Muhlemann et al 1992). A more strategically focused definition is required to unite the various views and approaches within organisations.
- 2) There is a lack of a set of generic empirically-based product characteristics which can be used as a base for linking the user-based and manufacturing-based views of quality' (for example Garvin 1984,

Oakland 1989, Krajewski and Ritzman 1990, Hill 1991).

- 3) There seems to have been little application of the tried and tested statistical quality control techniques to service quality characteristics (see for example Schonberger 1985, Schroeder 1989, Hill 1991). Yet it is these techniques which underpin not only the traditional, but also the more recent, approaches to quality.
- 4) While TQM has attempted to take a strategic focus and tried to integrate the various parts of the business through quality chains for example (see for example Oakland 1989, Slack 1991), it still seems to avoid dealing with the gap between the user- and manufacturing-based views of quality. It has not managed to integrate the production of products and services.
- 5) The operations management literature is predominantly product oriented. There is a significant gap in the operations literature about how to define, measure and control the quality of services.

It has been important to review the operations-based literature on quality as much of the basic understanding

and controlling of quality is found here. This thesis however, is concerned with service quality, achieving customer satisfaction in service situations. So it is now appropriate to review the service quality literature, much of which has sprung from marketing, to see if it can fill in any of the gaps identified above.

Chapter 4

SERVICE QUALITY

SUMMARY

This chapter describes how some authors have recognised the role of service quality as providing a competitive weapon for both manufacturing and service organisations. There is, however, some scepticism expressed about the ability of some organisations to support the provision of good customer service.

Several models and concepts of service quality have emerged from the activities of predominantly marketeers from the "Nordic School" and the "North American School".

There are three main emergent themes. Firstly there is the central notion of service quality from a customer's point of view. This supports the "traditional" marketing user-based quality perspective. The second is that the discussion of service quality centres around *perceived* quality and not the "actual" or operations view of quality. A third theme is the definition of customer perceived service quality as the degree of fit between customers' expectations and their perceptions of the service provided. These themes highlight the key roles for both marketing (in managing expectations before the service encounter) and operations (in managing the perceptions of service during the encounter).

The chapter describes a number of empirically derived characteristics of service quality, including both its product and service attributes, and a number of conceptual models.

Though there is some uncertainty about the difference between customer satisfaction and service quality, the weight of opinion would suggest that customer satisfaction is the result of customer perceived service quality. The section on service failure and recovery suggests that customers may accept that some services may fail but that it is the organisation's response to failure and its attempts to recover the situation that lead to feelings of satisfaction or dissatisfaction.

INTRODUCTION

The operations literature seems almost devoid of material on service quality. There is, however, a body of knowledge about service quality that is to be found in the emerging service management literature. The purpose of this chapter is to review the main service quality literature.

The first section considers the importance of service quality to manufacturing and service organisations.

The second section describes the development of the service quality management literature.

The third section reviews some of the main service quality models and concepts.

THE IMPORTANCE OF SERVICE QUALITY

In chapter three the role of quality was described as being important in providing a competitive advantage (see for example Feigenbaum 1986, Buzzel and Gale 1987, Oakland 1989). This contention was based upon a product-based understanding of the nature of quality (see for example Krajewski and Ritzman 1990 and Muhlemann et al 1992). A preliminary question must be whether service quality is different to product quality.

In chapter two it was suggested that there is a difference between the nature of goods and services (see for example Sasser et al 1978, Wild 1980, and Parasuraman 1985) and that a service quality advantage may also be used as a competitive weapon instead of, or alongside, product quality (see for example Hart 1988, Quinn Dorley and Paquette 1990 and Martin and Horne 1992). Indeed, Fitzgerald et al (1991) argued that many organisations, both manufacturing and service, are recognising that by improving the level of service provided, rather than the specification level of the goods, they can make significant and sustainable gains in the market place. They contested that quality of service provided can be, and increasingly is, a competitive weapon both for product as well as service oriented organisations. This is supported by other writers for example Barnes and Glynn (1992). Berry et al (1988) take this notion further and contested that "Service quality can often make the difference between a business's success and failure".

Humble (1989) in association with the Management Centre Europe conducted a survey of 1,055 senior managers across all sectors from 14 European Countries. He concluded that out of all the managers questioned:-

- * 90 per cent said service is more important than it was five years ago
- * 94 per cent saw service to the customer as being more/much more important in the next five years
- * 78 per cent said improving quality and service to customers is the key to competitive success

This survey was also conducted in the United States and Japan and the comparative results were published in 1990 by Humble in association with Digital. Some of the findings of this survey, which incorporated the opinions of nearly 4000 senior executives, are summarised in figures 4.1 to 4.3 and table 4.1.

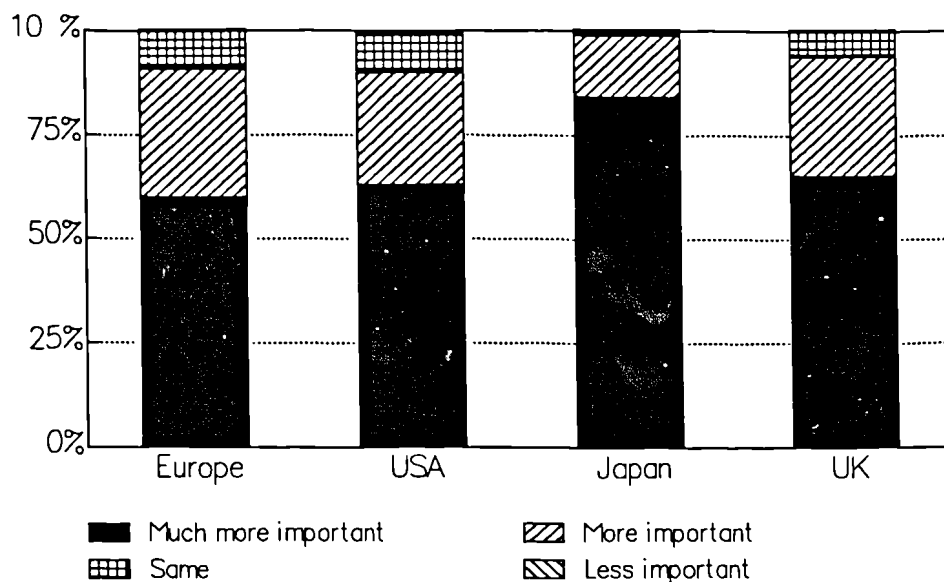


Figure 4.1 Attitude to service: Change over the last five years

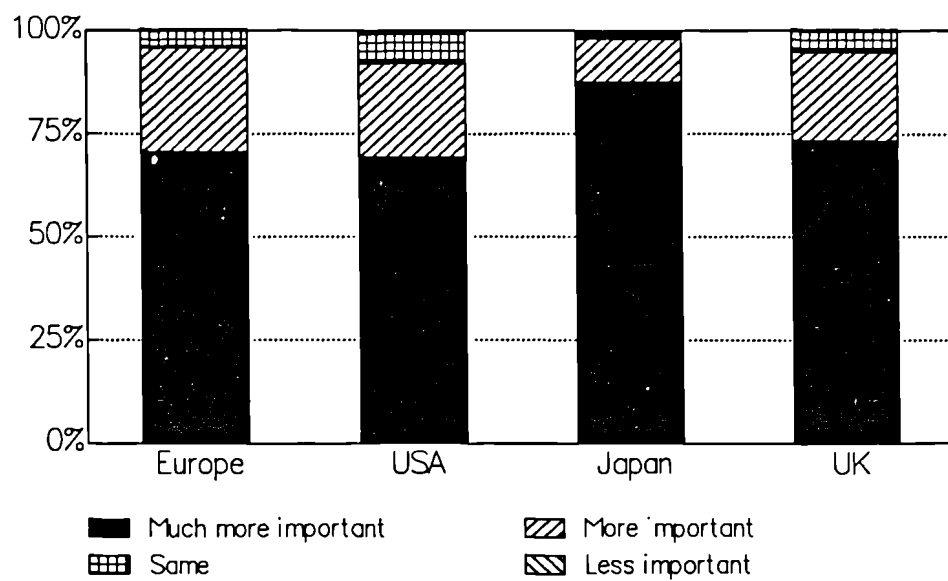


Figure 4.2 Attitude to service: The next five years

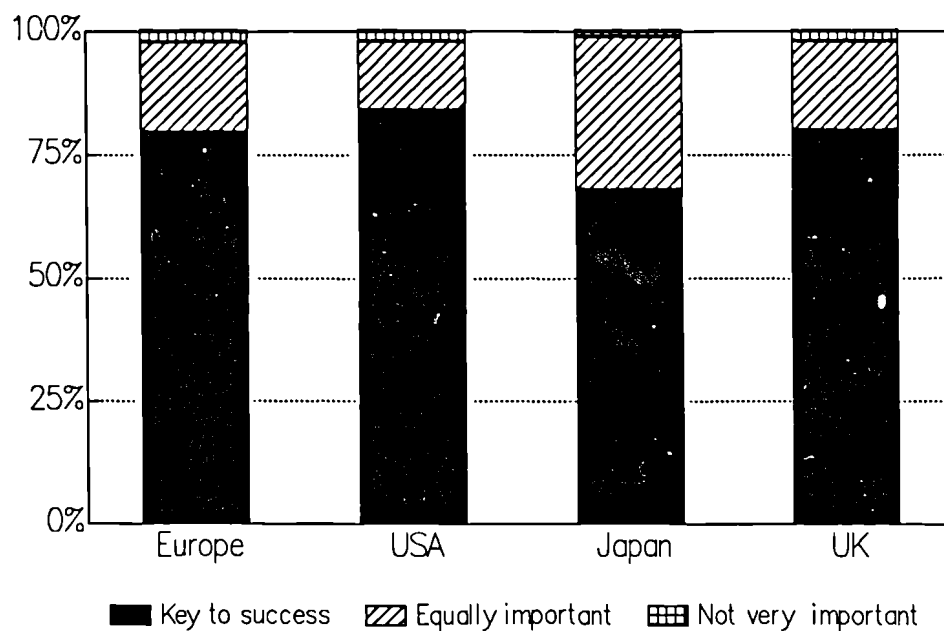


Figure 4.3 Improving service quality: How important is it?

	Europe -	USA	Japan	UK
Service is more important as a differentiator	4.3	4.4	4.6	4.4
Competition is fiercer	4.1	4.3	4.6	4.2
Customers are more demanding	3.9	4.0	4.5	4.1
Development of advanced technology	3.2	3.3	4.2	3.2
Shortening life-cycles of products and services	2.7	2.7	3.7	2.7

(average scores on a 0-5 scale)

Table 4.1 External pressures: Reasons for improving
service quality

The results from all the countries show service as being seen to be important. The Japanese results suggest that they regard service more keenly than the western world. As Humble stated "The Japanese regard service (getting it and giving it) with something close to total obsession". Though only 68 per cent of Japanese managers thought that improving quality and service to customers was the key to success (see figure 4.3), 31 per cent of their managers felt it was equally important with other competitive factors. This is maybe not a "total obsession" but a view tempered with the need to compete also in terms of delivery, cost and innovation for example. The main reason provided for giving more attention to customer service was that service was becoming more important as a differentiator (see table 4.1).

There seems to be some evidence from both academics and practitioners that service quality is different from product quality and that for many organisations a competitive advantage can be gained through service quality.

There is further evidence to suggest that service quality is being used by both manufacturing and service organisations.

Service quality in manufacturing organisations

There is some consensus in the literature that some product-based organisations are finding a competitive edge through service. Indeed, there is a view that many manufacturing managers are finding it more and more difficult to establish sustainable, technology-based competitive advantages particularly for those organisations that are operating in markets where there is little product differentiation or where product development is slow, difficult, expensive or short-lived (Fitzgerald et al 1991). In such circumstances manufacturing managers "will direct attention and resources to value-added services as a truer source of superiority" (Zeithaml et al 1990). Furthermore, this seems to be an increasing trend. Zeithaml et al (1990), for example, stated that "as the decade of the 1990s

unfold, more and more executives in manufacturing firms will be as keenly interested in service quality as executives in banking, health care, and transportation businesses are today".

The PIMS study highlighted the reasons why service quality seems to be important for manufacturing organisations. The findings suggested that not only does service quality have "an overwhelming impact on customer perceptions of quality" that makes it a useful competitive weapon, but, also as it tends to be less tangible it can be more durable and harder to create than product quality. High quality customer service, the authors claim, is the ultimate weapon (Buzzell and Gale 1987). A further reason was proposed by Shycon Associates (1982), an American management consulting firm. They surveyed customer service activities and the financial results of 185 US industrial companies with sales ranging from \$50 millions to \$8 billions. One of the study's main findings was that the difference between very good and very bad service can affect sales in absolute terms by six per cent or more.

This view is supported by practitioner Harvey-Jones (1989) who maintained that the successful chemical firms were those that "have developed an ability to provide a chemical service to customers, rather than selling a product in a bag".

Service quality in service organisations

Some service-orientated companies too, have recognised that there may be a need to provide high levels of customer service. Fitzgerald et al (1991) claimed that increasing competition, declining sales and more service-aware customers are putting pressure on service organisations to rethink and improve the levels of service that they offer.

Jan Carlzon, the chief executive and president of Scandinavian Airline Systems (SAS), is a frequently quoted exponent of this strategy. He implemented a strategy of significantly increasing the level of service provided by his company in the two years between 1981 and 1983 to deal with just such difficulties. By 1983 SAS had become one of the most punctual in Europe and number one choice for Scandinavian business executives. It was back in the black and won Fortune's Airline of the Year Award for "overall excellence and outstanding service to the customers". (This service advantage was, however, short lived.)

The importance of service as a competitive weapon was recognised and used by British Airways in the 1980s. Walker (1990), the consultant who designed and oversaw the implementation of BA's Putting the Customer First

Campaign stated "Competitive advantage must be based on a noticeable difference which meets identified customer needs better than others. This can only happen if service is treated as a strategic issue".

The reasons why service organisations see service quality as important seems to be similar to that proposed for manufacturing industries. Organisations may be able to gain some differential advantage from service quality and growth in revenues. James Robinson, the Chief Executive Officer of American Express, added another reason. He saw the continual development of service quality as "our only form of patent protection" (in Zeithaml et al, 1990).

Service quality or lip service?

There is an alternative view, however. Some academics and practitioners claim that this concern for service quality is a sham. Davidow and Uttal (1989), for example, believed that we are moving not toward a service economy but to a "no-service" economy. They stated when "asked whether serving customers well is a crucial weapon for winning business most managers nod sagely in agreement yet for all their awareness and good words, managers rarely succeed in delivering outstanding service". The authors provided many examples to support their contention. Their perspective, one might claim, is

a little biased and maybe intent on creating fear and drumming up trade for their consultancy practice.

Gummesson, in a more dispassionate(?) paper (1987), looked at the results of the "no-service" economy from the customer's point of view and felt that lip service was all too evident. In his tongue-in-cheek paper he claimed that lip services account for at least one third of all services produced. He classified lip services into vendor-produced, consumer-produced and professional types. His concern was that "much is often promised in the promotion of the service and less is delivered ... leading to customer dissatisfaction". Gummesson neatly puts his finger on the gap between operational ability and marketing activity.

There is also a view that the service provided by many organisations is not only poor but is declining as is the level of customer satisfaction with those services. Zemke and Schaaf (1990) reported the content of the Cambridge Report (unreferenced) which asked 1500 people "How well do service companies meet your needs and concerns as a customer". Only eight per cent rated them excellent and 50 per cent good. A Price Waterhouse report (quoted in Davidow and Uttal 1989) claimed that the level of customer satisfaction appears to have deteriorated substantially over the last decade. The report claimed that this deterioration has been the

result of extreme pressures on profits, overexpansion, understaffing and an obsession with short term cash flow. Davidow and Uttal suggested three causal factors in the gap between managers perception of what is important and the customer perceived performance of their organisations:-

- 1) Managers don't understand the roots of the service crisis and that they don't comprehend the amount of dissatisfaction created.
- 2) There is use of misleading measures of customer service and satisfaction.
- 3) Managers don't understand what customer service is.

Mattsson (1991) supported two of these contentions and claimed that managers experience difficulties in understanding and controlling the quality of services.

There is some evidence that some manufacturing and service companies believe that service quality is an important competitive weapon and can provide them with a differential advantage over competitors. However, there is also a belief that this is a strategy comprised of hollow words and is a strategy that some organisations are unable to deliver. Is it then the case that many organisations, whilst espousing a desire to compete in

this way, find great difficulty in implementing such a strategy? Considering the state of the operations literature on measuring, controlling and improving service quality it is maybe not surprising that practitioners are experiencing such difficulties.

SERVICE QUALITY MANAGEMENT

There is a body of research that may be coming to the rescue. A number of researchers, notably from the marketing area, have been focusing specifically on service quality. Mattsson (1992a), however, suggested that their number is few. He claimed that "only a handful of researchers have focused on service quality". In the last few years a small number of specialist academic texts have been published in this area, for example Moores (1986), Zeithaml, Parasuraman and Berry (1990), Berry and Parasuraman (1991), Brown et al (1991), Grönroos (1990), Mattsson (1991) and Teboul (1991). Several practitioner-based texts have also been published, for example Carlzon (1987), Desatnick (1987), Lele and Sheth (1987), Lash (1989), Zemke and Bell (1989) and Albrecht (1990).

A glance at the service quality literature seems to suggest that there is in fact not one body of knowledge on service quality, but two bodies driven by two main and distinct streams of academic activity. These have been

referred to by academics as the "Nordic School" and the "North American School" (see for example Grönroos and Gummesson 1985, Gummesson 1989, Brogowicz et al 1990).

The Nordic School

The Nordic School includes writers such as Edvardsson, Grönroos, Gummesson, Lehtinen and Mattsson. They, and others, have been primarily concerned with the nature of service quality, its interactive nature, the role of marketing and the dimensions of service quality (Brogowicz et al 1990).

The North American School

The North American School would include writers such as Bitner, Booms, Bowen, Brown and Haywood-Farmer whose work has included the application of the gap model and developing models of service quality. However the contribution which is usually regarded as the most significant has been made by Berry, Parasuraman and Zeithaml (see for example Fitzgerald et al 1991 and Haywood-Farmer and Nollet 1991). In 1983 they submitted a proposal to the Marketing Science Institute for funds to do exploratory research on service quality. This research has developed into one of the most comprehensive activities of service quality to date (Fitzgerald et al 1991). Phase I was a qualitative survey of service

customers and service company executives which resulted in the development of the determinants of service quality and the service quality model (the "gap" model). Phase II was a large scale empirical study that focused on the customer and resulted in the derivation of the SERVQUAL measuring instrument. Phase III focused on the service provider and Phase IV considered the development of customer expectations. Their work has provided a base for, and a stimulus to, many other researchers in the service quality field and their work continues to this day.

The difference in outlook by these two streams of activity can be illustrated by an analysis of the references of three representative recent service management texts. Table 4.2 provides an analysis of the references from Berry and Parasuraman (1991) representing the North American School, Grönroos 1990 representing the Nordic School and Normann 1991 a Paris-based author as a control. The references were categorised according to the location of the first named author in each reference.

Although it is no surprise that the majority of references are from the author's own country, the proportion of references outside the country reveals the parochial nature of the two groups' research activities. Berry and Parasuraman are the most parochial (with only four per cent of the identifiable references outside the USA). Next comes Grönroos with 53 per cent outside

Scandinavia and Normann, based in France, 66 percent of references outside his own country.

	Berry and Parasuraman (1991)	Grönroos (1990)	Normann (1991)
USA	95%	39%	39%
Canada	-	1%	2%
Scandinavia	1%	42%	16%
France	-	3%	30%
UK	2%	7%	7%
Germany	-	1%	2%
Holland	1%	-	-
Italy	-	0.5%	-
Switzerland	-	0.5%	-
Belgium	-	1%	-
Others	-	1%	-
Unknown	2%	4%	3%
(n=	158	222	43)

Table 4.2 A review of the references of three
service management texts

There could be many reasons for this parochialism. Quite clearly "local knowledge" and ease of access will be key factors. Another factor might be language, however, the majority of the works referred to by Grönroos, for example, are written in English, suggesting that they could be read by non-Scandinavian researchers.

A third factor could be that the Scandinavians and the North Americans are pursuing quite different academic agenda. This does not appear to be the case. Witness

for example, the similarities between Parasurāman et al's gap model (1985) and Grönroos' definition of quality as a gap between expectations and perceptions (1984), or Parasuraman et al's five quality factors (1988) and Grönroos' two main quality dimensions (1984). Both sets of literature seem to be jointly concerned with the definition, measurement and improvement of service quality. Another factor could possibly be the reluctance, of particularly the American researchers, to review the existing and well established Scandinavian and European literature. Is this a form of academic protectionism?

The European School

One might suggest that there is also a "European School" contributing to the body of knowledge on service management. This point is, to some extent, supported by Brogowicz (1990) and Grönroos (1990) who both acknowledged the British and continental European contributions to the literature. Brogowicz, however, combined them with the North American credits and Grönroos leaves them in mid-Atlantic. For the sake of completeness one ought, at least, to include the names of Bateson, Cowell, Eiglier and Langeard, Normann, Van Dierdonck and Voss.

SERVICE QUALITY MODELS AND CONCEPTS

The service quality writers, from all three "schools" have developed many concepts and models. Some of the main developments will be described in the remainder of this chapter and in the next chapter. The service quality models and concepts will include:-

- 1) the definition of service quality
- 2) service quality characteristics
- 3) service quality measurement
- 4) gap analysis
- 5) service recovery
- 6) satisfaction and dissatisfaction (chapter 5)

1) THE DEFINITION OF SERVICE QUALITY

The quality definitions described in chapter three were, in most cases, said to be applicable to both products and services. Indeed, many of the definitions specifically mentioned both goods and services. The service quality literature, however, from its predominantly marketing base, has provided some refinements particularly to the user-based approaches. A few writers also have identified some problems with applying the manufacturing-based approach to services.

Problems with the manufacturing-based approach

One could argue that the manufacturing-based definition of quality as "conformance to specification" is equally applicable to services. However, several authors Cowell (1984), Heskett (1987) and Haywood-Farmer and Nollet (1991) for example, contested that the difficulty here is that formal service specifications are not always as readily available in service organisations as product specifications are in manufacturing businesses due to the intangible nature of some services. Cowell further linked the problems of specification to the concept of a service as a complex bundle of services which is difficult to unbundle and thus specify and define its component parts.

Heskett (1987) also argued that reaching consistent quality in services is more difficult than in manufacturing because there are more factors likely to cause errors; labour, equipment, the delivery system and the customer themselves. Morris and Johnston (1987) developed this last point and claimed that the key difficulty in providing consistent conformance to specification is the variability inherently created by the presence of the customer inside the service system.

Some authors believed that this variation is also an opportunity. Mills and Morris (1992) believed that "Each service creation episode may be distinctive, with considerable variation ... for the service provider, the client is at once a crucial source of uncertainty but also the means to its resolution". Bowen (1986) and Bowen and Schneider (1988) even defined service quality as a "game between two persons". How the customer can best be used in service operations is further explored in Lovelock (1979), Bowen and Schneider (1985), Bowen (1986), Mills and Morris (1986) and Johnston (1989).

The user-based approach

Zeithaml et al (1990) saw these problems from the users' point of view. They recognised that not only is it difficult for the operation to specify the service but for the customer also, due to the intangible nature of service. Voss et al (1985) and Haywood-Farmer and Nollet (1991) identified a further difficulty; that the requirements for each and every customer may be different (a point attributed to Garvin in chapter three). The user-based approach to service quality however is prevalent with services management researchers and seems to form the foundation of most of the ongoing research and therefore the development of service management (Grönroos 1990). Gummesson (1991) explained that this is probably due to the fact that service quality has

developed out of marketing and not out of operations management or statistical quality control.

There are three main issues reviewed here under the user-based approach to service quality; the importance of customers' perception of quality, the two main dimensions of service quality and service quality as the gap between expectations and perceptions.

a) Customers' perception of quality is key

Most authors contend that quality is in the eye of the beholder and that customers' perception of quality is all important (for example Parasuraman 1985, Peters 1986, Gummeson 1987, Berry et al 1991). Peters (1986), for example, stated that "Customers perceive service in their own unique, idiosyncratic, emotional, erratic, irrational, end of the day and totally human terms. Perception is all there is".

Grönroos (1990) claimed to have been the first to propose the "perceived service quality approach" in 1983. This approach, however is not new. The consumer behaviour field takes a customer's view of quality (see for example Cardozo 1965, Lancaster 1966 and Swan and Combs 1976, Wierenga 1984). Lancaster (1966), for example, in his New Economic Theory of Consumer Behaviour, ignored the perceived characteristics of products and examined the

relationship between product attributes (from the organisation's perspective) with customer satisfaction. In 1984, Wierenga demonstrated the difference between perceptions and attributes.

The use of the customer's view can be found even earlier in the psychology literature, for example Bruner and Tagiuri in 1954 underlined the importance of perception "people make judgements about others on some inferences and understanding of unconscious judgement". In the operations area, Sasser et al (1978) too believed that customer-perceived quality is the ultimate, though subjective, definition of quality.

Grönroos underlined the critical nature of perceived service quality (1990). He said that at each moment of truth (an interaction between the customer and the resources of the firm) there is a moment of opportunity to provide the customer with perceived service quality. In the next moment the situation may be over and there is no way of adding value to the perceived service. The moment of opportunity has gone.

Some authors for example Collier (in Bowen et al, 1990) and Haywood-Farmer and Nollet (1991) added another point to the debate on customer perceived service quality. They suggested that there may be occasions when customers are unable to judge the technical quality of the service

itself. They may then use surrogate measures as a basis for their perceived service quality. Haywood-Farmer and Nollet provided the example of a customer who may not be able to judge the technical repair undertaken by a repair technician (except that it works or does not) and who thus may judge the technical quality of the repair on the politeness, smartness and the information provided by the technician. "Customer perceptions of quality are also based upon what the provider appears to be doing during the service" (Haywood-Farmer and Nollet 1991).

b) Two dimensions of service quality

Grönroos (1984) defined service quality as having two dimensions. First *how* the service is delivered (which he calls functional quality) and second *what* is delivered (technical quality). This view was supported by Brogowicz et al (1990) "service managers must determine both what customers want and how they expect to receive the service offering". Lehtinen (1983), Berry et al (1985) and Gummesson (1989) too supported this notion though they use the terms *service outcome* and *service process*.

It is interesting to note that these views seem to imply that service quality encompasses both *product* and *service* quality because the *what* (or the service outcome) could potentially include both goods and services (Sasser et al

1978). (Grönroos defined the *what* as the quality of the product delivered and the quality of what the customer is left with after the production process). Walker (1990) suggested that "Service involves material aspects such as product reliability, delivery accuracy, as well as the personal element represented by the interaction of front-line staff with customers". Jan Carlzon went further and said that service quality was not only about having the right products (routes) and the right facilities (aircraft), it was about making sure that the whole of the customers' experience was right.

Other authors, however, for example Cowell (1984), Johnston 1987, Haywood-Farmer and Nollet (1991), Teboul (1991) and Fitzgerald et al (1991) take service quality to be just the *how* and not the *what*. Haywood-Farmer and Nollet defined service quality as encompassing "all the elements involved in *delivering* a product or service" which does not necessarily include the tangible, product aspects of quality. Service quality they believed is about the intangibles and can be "thought of as forming the context in which the product or service exists". Johnston (1987) saw service quality purely in process terms.

What seems to emerge from the literature is that there are two distinct views about the nature of service quality. One view considers it to be concerned only with

the intangible side of the service package, the other view considers it to be all embracing.

- c) Service quality - the gap between expectations and perceptions

Grönroos (1984) defined customer perceived service quality as the result of the process of evaluation of perceived service against expected service. Berry et al (1985) concluded from their focus group work (phase I) that "consumer perceptions of service quality result from comparing *expectations* prior to receiving service and actual *experiences* with the service". Johnston (1987) refined these definitions a little and stated that a customer's view of service quality is based upon "the degree of fit between his or her expectations of the way he or she will be treated and his or her perceptions of the way he or she was treated".

There seems to be some agreement in the service management literature that customers enter the service process with expectations about the (goods and) services they are to receive. Then these expectations are compared to the perceived experience by the customer to end with a feeling of satisfaction (see for example Berry and Parasuraman 1991, Brogowicz et al 1990, Grönroos 1990, Haywood-Farmer and Nollet 1991, Parasuraman 1985). Berry and Parasuraman (1991), for example, stated that if

the experience was better than expected, satisfaction (and service quality) is high. If the experience was less than the expectation then satisfaction/quality is low. If satisfaction equals expectation then satisfaction is average. They represent the possible outcomes as a continuum, see figure 4.4.

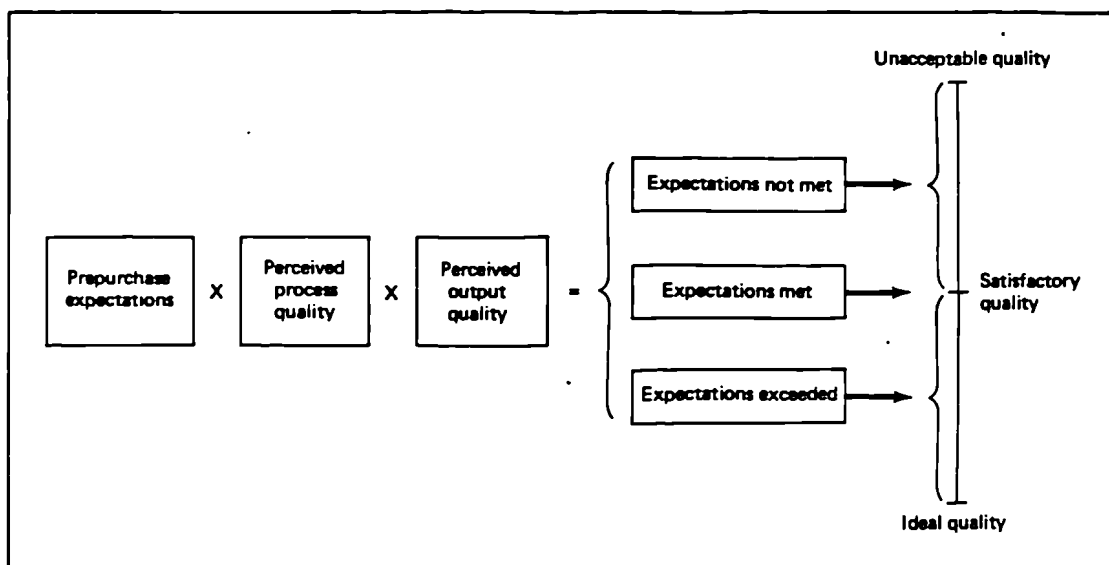


Figure 4.4 The continuum of perceived service quality

Johnston and Lyth (in Brown et al 1991) represented the outcome as a two dimensional space where the diagonal area represents satisfactory outcomes and the other areas a mismatch between expectations and perceptions resulting in either satisfaction or dissatisfaction, see figure 4.5.

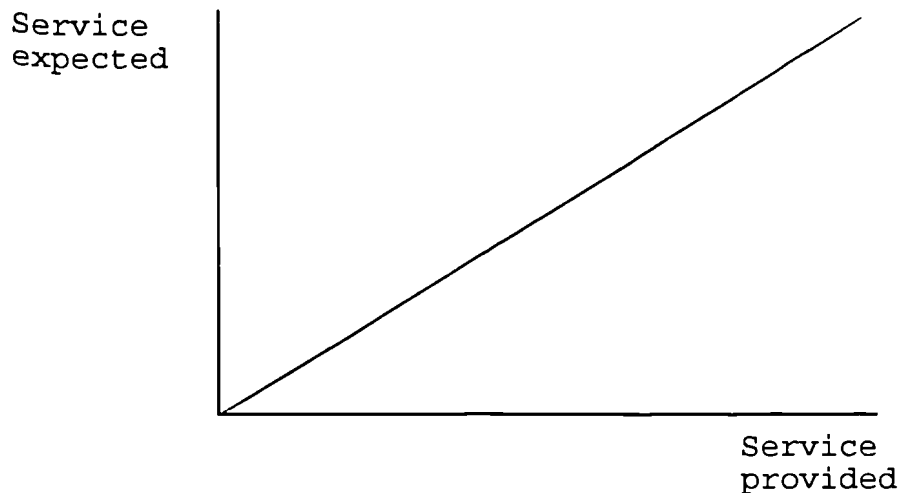


Figure 4.5 The Johnston and Lyth model

These models are primarily concerned with the *outcome* of service, that is to say, at the end of the day, did perceptions meet expectations or not. Johnston (1987) took a more process approach and proposed a model which identified the development of perceived service quality during the *process* of service delivery itself (see figure 4.6).

Johnston postulated that there are several key points in the service process and considers some of the quality factors at each stage that may contribute to the build up of perceived service quality based upon not only the customer's expectations as he or she enters the service system, but as the customer's expectations are refined and adjusted by the experience during the various stages of the process itself.

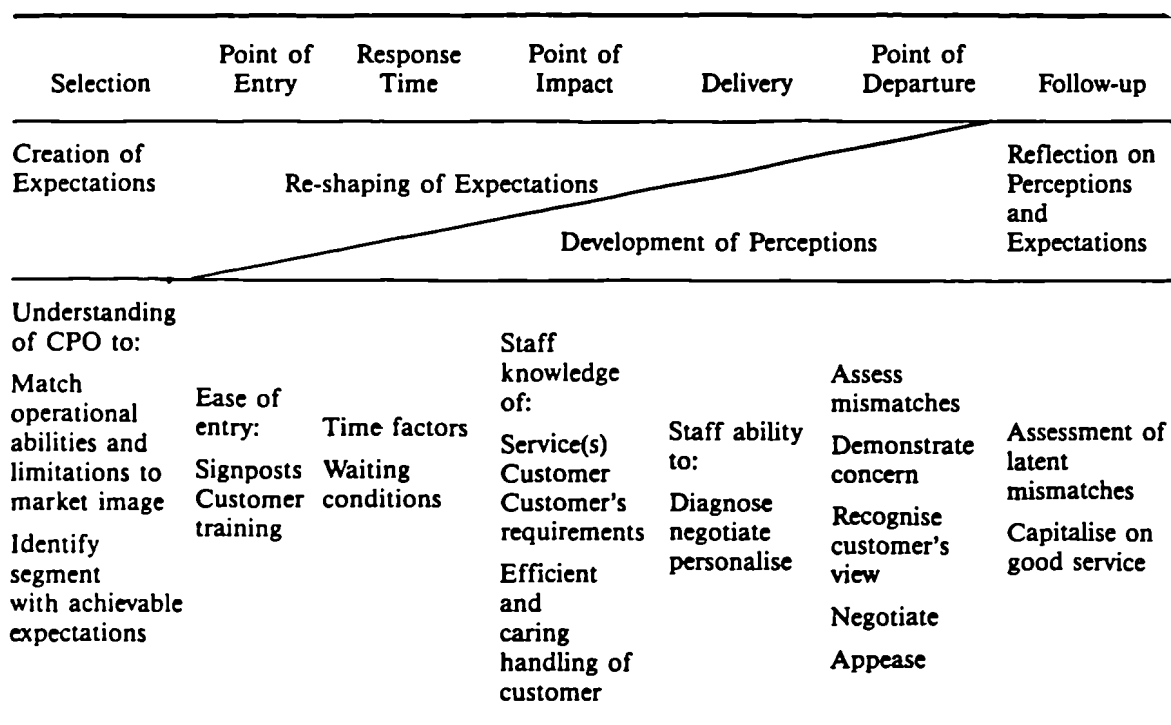


Figure 4.6 The customer processing operations framework

The definitions of service quality so far seem to imply the aim of matching expectations and perceptions. Some authors go further. Rose (1991), for example, suggested that service providers should go beyond satisfying the customer and consider delighting them with the quality of service. This view is supported in some of the practitioner-based literature. Kempner 1990, for example stated that superior service companies such as American Express, IBM, Caterpillar, JP Morgan, Singapore Airlines, to name but a few, spoil customers, not through altruism but from purely self interest. Peters and Waterman

(1982) claimed that "by leading customers to expect even better service, and by exceeding those expectations, companies build strong customer loyalty. In the same way they make less able competitors look worse and lose more and more business". This philosophy of continuing improvement is supported by the TQM literature discussed earlier. However, there is the problem that by raising customers' perceptions of quality, their expectations next time will be higher and therefore harder to meet. Davidow and Uttal (1989) discussed the need to "rein in expectations". They described the need to influence customer expectations "Keeping expectations at just the right level - slightly below perceived performance" as a constant challenge.

The user-based approach to quality seems to be predominant in the service management literature. This is likely to be due to the marketing base of much of the service management literature which has a greater customer focus, than does the manufacturing literature for example. One interesting point is the varied use of the words "service quality" or "customer satisfaction" as the outcome as the expectation/experience comparison. Some authors (for example Grönroos 1984, Gummesson 1987, Johnston 1987, Zeithaml 1990) use both. Is there a difference?

Lindquist and Persson (1992) suggested that service quality is often substituted for satisfaction though they believe that there is a subtle difference "Speaking of service quality in terms of 'customer satisfaction', for example, directs attention to the customer (actor) and away from the service (inter-action) itself". Others, Moores (in Jones 1989) in particular, differentiated between service quality and customer satisfaction. He is quite clear that the difference between expected and perceived quality is not service quality but customer satisfaction. He contended that service quality is the organisation's view of quality. He provided the following example to try to explain the difference as he saw it. "It is difficult for me to come to terms with the fact that, if someone attends a hospital outpatient appointment expecting to wait needlessly for two or three hours along with other individuals who might well have been assigned an identical appointment time, then the quality is acceptable if indeed the duration is of two or three hours." Davidow and Uttal (1989) too, defined this as customer satisfaction "Satisfaction, or the lack of it, is the difference between how a customer *expects* to be treated and how he or she *perceives* being treated".

In the consumer behaviour literature Cardozo (1965) for example, although referring to products and not services, claimed as a result of his research that "customer satisfaction is lower when the product does not come up

to expectations than when the product meets expectations". Swan and Combs (1976) indicated that satisfaction results from the fulfilment of expectations.

Sasser et al (1987) developed the satisfaction idea but added a price dimension. They defined satisfaction as the result of the trade off in the customer's mind between the perceived service level and price.

The service management literature seems to be reasonably consistent on three points:-

- 1) The specification of a service is difficult from both the customer's and operation's points of view (see for example Heskett 1987 and Zeithaml et al 1990).
- 2) Most service quality writers support the view that customer perceptions of service quality are important and that the result is customer satisfaction or dissatisfaction (see for example Grönroos 1984 and 1990 and Berry et al 1985).
- 3) Finally (and also a key theme for this thesis) is that satisfaction is related to the size and direction of the gap between a person's expectations and his or her perceptions of the service

performance (see for example Berry et al 1985 and Johnston and Lyth 1991).

Several questions arise which do not appear to be answered satisfactorily by the literature so far:-

- 1) What is the service specification and what are the characteristics of service that create the specification? Are there others than those put forward in chapter three?
- 2) If specifying the service is difficult, then measuring conformance to specification is clearly problematic. How therefore can the characteristics be measured and controlled (especially considering that the operations statistical process control techniques seem only to deal with the tangible characteristics of quality)?
- 3) Does service quality incorporate product quality or are they each concerned with different parts of the customer's experience?
- 4) Is perceived service quality the same as customer satisfaction or is there a process whereby perceived service quality is translated into a feeling of satisfaction?

As service quality is provided by the operation but perceived by the customer, the area of service quality is one of joint responsibility for marketing and operations. Haynes and DuVall (1992) for example, stated "the interaction characteristics between provider and customer ... result in a perception of service quality". They recognised the joint responsibility for quality by the providers (the place where expectations are unlocked) and the image makers, the influencers of perceptions. Whilst marketing has a key role to play in actively managing customer expectations (Morgan and Piercy 1991), operations has a role to play in creating and managing perceptions (Johnston 1987).

The following sections review some of the literature that deals with some of the questions raised above:-

- * What are the characteristics of service quality, and are they different from product quality characteristics? (Section 2)
- * How can perceived service quality be measured? (Section 3)
- * How can organisations try to ensure there is no gap between expectations and perceptions? (Section 4)

- * How do organisations recover when things go wrong to try to ensure that satisfaction is achieved even when perceived quality is seen to be poor? (Section 5)

- * How is the feeling of satisfaction or dissatisfaction created in the minds of customers and how can operations management help in the process of ensuring customer satisfaction with the process and its outcome? (Chapter 5)

2) SERVICE QUALITY CHARACTERISTICS

It has already been suggested in the previous chapter that there are many service quality characteristics; beauty, taste, responsiveness, truthfulness, courtesy, sympathy, knowledge, reputation, sensitivity, and competence for example. If service quality encompasses product quality, then one should also add the product oriented ones too, for example dimensional accuracy and number of rejects.

Given the central role of customer perceived service quality Zeithaml et al (1990) stated that the only criteria that count in evaluating service quality are those defined by the customer. Unlike the manufacturing literature, the service literature provides some empirical underpinning of the quality characteristics as

determined by customers. This is not easy, as Sasser et al (1987) stated "the range and ephemeral nature of services makes it difficult to enumerate, quantify or even elicit consumer perception of the quality .. of a service. The problem is amplified by the fact that the characteristics of service are embodied in a multitude of elements that is the facilitating good, service facility and the service employee".

Most writers agree that customers' expectations are rarely concerned with a single aspect of the service package but with many of them (for example Sasser et al 1978 and Berry et al 1985). Johnston and Lyth (1989) concurred with this view and proposed the following expression to represent the relationship between customer satisfaction and the various quality characteristics:-

$$CS = \sum_{x=1}^n W_x * SF_x$$

Customer satisfaction with service (CS) is the sum of satisfactions with various service quality factors (SF), weighted according to customers' feelings (W), for all (x) factors. Johnston and Lyth did not, however, identify the quality factors involved in their formula.

There has been an amount of work which has been concerned with identifying the service quality factors.

Interestingly the literature on the factors seems to be going in two different directions. Parasuraman et al started with ten characteristics and reduced them to seven and then five, while Johnston et al started with Parasuraman et al's ten and increased them to twelve then seventeen.

Service quality characteristics - Parasuraman et al

Parasuraman et al (1985) provided a list of ten determinants of service quality as a result of their phase I, focus group studies with service providers and customers. In a later paper that year they added that "although the relative importance of the categories would vary from one service industry to the next, we believe the determinants of service quality in most (if not all) consumer service industries are included in this list" (Berry et al. 1985). They defined the ten determinants as follows:-

RELIABILITY involves consistency of performance and dependability

RESPONSIVENESS concerns the willingness or readiness of employees to provide service. It involves timeliness of the service

COMPETENCE means possession of the required skills and knowledge to perform the service

ACCESS involves approachability and ease of contact

COURTESY involves politeness, respect, consideration and friendliness of contact personnel

COMMUNICATION means keeping customers informed in a language they can understand and listening to them

CREDIBILITY involves trustworthiness, believability, honesty. It involves having the customer's best interests at heart

SECURITY is the freedom from danger, risk or doubt

UNDERSTANDING/KNOWING THE CUSTOMER involves making the effort to understand the customer's needs

TANGIBLES include the physical evidence of service

These, they contested, are the ten dimensions which customers use to compare their expected service with the perceived service, though their relative importance may vary, see figure 4.7.

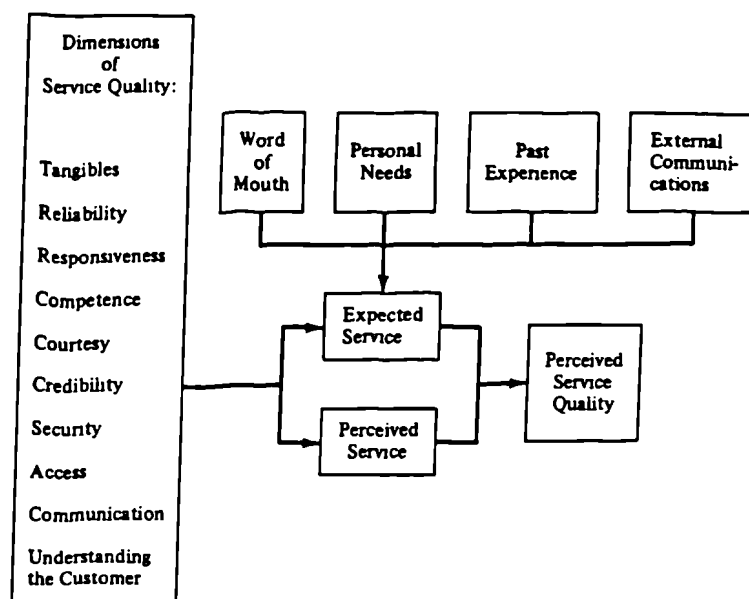


Figure 4.7 Customer assessment of service quality

In the next phase of their research, Berry et al found a high correlation between competence, courtesy, credibility and security factors and between access and communication factors and so they created the two broad dimensions of assurance and empathy, ie five consolidated dimensions (though their empirical base was limited to credit card, repair and maintenance, long distance telephone and retail banking services at that stage). These five general dimensions are tangibles, reliability, responsiveness, assurance and empathy (Zeithaml et al 1990). They also reported that, regardless of the service being studied, reliability was the most critical dimension, followed by responsiveness, assurance and empathy. The intangibles were of least concern to service customers. These five dimensions, they felt, captured all the ten previous dimensions see figure 4.8.

These dimensions have been much criticised. Finn and Lamb (1991), in a study of retailing, concluded that their results did not support Berry et al's belief that the instrument could be used to assess quality in a wide range of service firms. They found that the model's five dimensions were insufficient to cover quality in a retailing setting. They particularly questioned whether the five dimensions are generic and suggest that much development and refinement is needed. Cronin and Taylor (1992), in their research into service quality in banks, pest control, dry cleaning and fast food found little

support for the five dimensions. They stated our "results suggest that the 5-component structure proposed by Parasuraman, Zeithaml and Berry (1988) for their SERVQUAL scale is not confirmed in any of the research samples".

Original Ten Dimensions for Evaluating Service Quality	SERVQUAL Dimensions				
	Tangibles	Reliability	Responsiveness	Assurance	Empathy
Tangibles					
Reliability					
Responsiveness					
Competence					
Courtesy					
Credibility					
Security					
Access					
Communication					
Understanding the Customer					

Figure 4.8 Correspondence between SERVQUAL dimensions and original ten dimensions

A further issue here is that Berry et al's work, and indeed that of many of their detractors, is that they only investigate what is important to the customer. This does not necessarily distinguish between the effect of the factors in terms of creation of satisfaction or dissatisfaction. It is implicitly assumed that they are the two sides of the same coin, for example, reliability

was Berry et al's most important factor which implies that unreliability will lead to dissatisfaction and good reliability will lead to satisfaction. Could it not be that a train which arrives on time is satisfying not satisfying? Their instrument only measured the importance not the relative impact of any individual, or collection of, factors.

Service quality characteristics - Johnston et al

Research by Johnston et al (1990) involved some testing of the comprehensiveness of Parasuraman et al's service quality determinants in the light of empirical data gathered in ten UK service organisations. The quality factors identified for each service were listed and compared to Parasuraman et al's ten determinants. Their analysis revealed the following discrepancies:-

a) Tangibles

There seems to be a conceptual inconsistency in the identification of "tangibles" as a quality factor. Although tangibles, defined by Parasuraman et al as the appearance of physical facilities, equipment, personnel and communication materials form part of the service package they cannot themselves be seen as quality factors. They are *components* of the service package not their quality characteristics.

Johnston et al identified several quality characteristics for the tangible parts of the service package including cleanliness, comfort and availability. They further argued that several of the determinants proposed by Parasuraman et al related to the quality of tangible deliverables, for example, reliability, communication, access and security.

b) Responsiveness

Johnston et al suggested that Parasuraman et al's definition of responsiveness ('willingness to serve') is too loose. They preferred to limit it to delivery speed and response times and differentiate between *how well* and *how fast* as a provider can be fast but not particularly willing.

c) Courtesy and Friendliness

Whilst Parasuraman subsumed friendliness under courtesy, Johnston et al argued that these are two different factors on the grounds that they can, on occasions, be mutually independent.

d) Access and Availability

Johnston et al distinguished between accessibility of service and availability. Access was defined as the ease and convenience of the service location and the clarity of route through the service environment. Availability of service has to do with product/service range, the availability and visibility of services and staff to the customer.

e) Understanding and Credibility

Johnston et al found no empirical evidence for these two factors. They considered that understanding could be subsumed under communication since understanding is necessary in order for two-way communication to take place. Credibility, they argued, was not a quality factor as such, but rather "an organisation's long term reputation for quality, ie its achievement against a range of quality factors over a period of time as assessed by customers".

Johnston et al developed their own twelve service quality characteristics (reported in Fitzgerald et al, 1991):-

ACCESS: convenience of unit location, ease of finding way
around service environment, clarity of route

AESTHETICS: relates to environment, staff, goods and facilities; includes level of decor, image, dress of staff, taste of food

AVAILABILITY: including service/product availability, staff availability/visibility, product/service range and variety

CLEANLINESS/TIDINESS: relates to environment, staff, goods and facilities

COMFORT: relates to service environment; includes seating comfort, atmosphere and ambience, levels of crowdedness

COMMUNICATION: includes communication between staff and customer, intelligibility and clarity of information

COMPETENCE: includes staff skill, expertise, knowledge, thoroughness

COURTESY: politeness, respect, propriety of staff towards customer

FRIENDLINESS: includes helpfulness of staff, attentiveness to customer

RELIABILITY: dependability of staff, service process, facilities. Also includes delivery reliability, punctuality, ability to keep to agreed deadlines

RESPONSIVENESS: delivery speed, response times

SECURITY: personal safety, confidentiality

Despite the fact that Johnston et al seem to have gone some way towards developing Parasuraman et al's list of quality factors and refining the definitions, the

limitation of their work lay in the fact that the empirical investigation drew only on management perceptions of service. Unlike Parasuraman et al, Johnston et al did not use customer data in order to identify the determinants of service quality.

Johnston and Silvestro (1990) went on to add the customer's perspective to their service quality characteristics. This led to the identification of an additional five service quality factors, attentiveness, care, commitment, functionality, integrity, and a refining of some of the other factor definitions. Their complete list of factors and definitions is:-

ACCESS: The physical approachability of service location, including the ease of finding one's way around the service environment and clarity of route.

AESTHETICS: Extent to which the components of the service package are agreeable or pleasing to the customer, including both the appearance and the ambience of the service environment, the appearance and presentation of service facilities, goods and staff.

ATTENTIVENESS: The extent to which the service, particularly contact staff, give the customer the impression of being interested in the customer and show a willingness to serve.

AVAILABILITY: The availability of service facilities, staff and goods to the customer. In the case of

contact staff this means both the staff/customer ratio and the amount of time each staff member has available to spend with each customer. In the case of service goods availability includes both the quantity and range of products made available to the customer.

CARE: The concern, consideration, sympathy and patience shown to the customer. This includes the extent to which the customer is put at ease by the service and made to feel emotionally (rather than physically) comfortable.

CLEANLINESS/TIDINESS: The cleanliness, neat and tidy appearance of the tangible components of the service package, including the service environment, facilities, goods and contact staff.

COMFORT: The physical comfort of the service environment and facilities.

COMMITMENT: Staff's apparent commitment to their work, including the pride and satisfaction they apparently take in their job, their diligence and thoroughness.

COMMUNICATION: The ability of the service to communicate with the customer in a way he or she will understand. This includes the clarity, completeness and accuracy of both verbal and written information communicated to the customer and the ability to listen to and understand the customer.

COMPETENCE: The skill, expertise and professionalism with which the service is executed. This includes the

carrying out of correct procedures, correct execution of customer instructions, degree of product or service knowledge exhibited by contact staff, the rendering of good, sound advice and the general ability to do a good job.

COURTESY: The politeness, respect and propriety shown by the service, usually contact staff, in dealing with the customer and his or her property. This includes the ability of staff to be unobtrusive and not interfering when appropriate.

FRIENDLINESS: The warmth and personal approachability (rather than physical approachability) of the service, particularly of contact staff, including cheerful attitude, the ability to make the customer feel welcome.

FUNCTIONALITY: The serviceability and fitness for purpose or 'product quality' of service facilities and goods.

INTEGRITY: The honesty, justice, fairness and trustworthiness with which customers are treated by the service organisation. This includes the ability to maintain confidence and mutual trust between customer and service provider.

RELIABILITY: The reliability and consistency of performance of service facilities, goods and staff. This includes punctual service delivery and ability to keep to agreements made with the customer.

RESPONSIVENESS: Speed and timeliness of service delivery.

This includes the speed of throughput and the ability of the service to respond promptly to customer service requests, with minimal waiting and queuing time.

SECURITY: Personal safety of the customer and his or her possessions while participating in or benefiting from the service process. This includes the maintenance of confidentiality.

Service quality characteristics - other authors

A number of other authors have also postulated their own quality characteristics though in some cases they appear to have been based on Berry et al's well publicised work.

Walker (1990) suggested that the key factors are; product reliability, a quality environment, and delivery systems that work together with good personal service - staff attitude, knowledge and skills. Grönroos (1990) postulated six criteria of good perceived service quality; professionalism and skills, attitudes and behaviour, accessibility and flexibility, reliability and trustworthiness, recovery, reputation and credibility. Albrecht and Zemke (1985) suggested care and concern, spontaneity, problem solving, recovery.

Armistead (1990) split the dimensions into "firm" and "soft". The firm dimensions are time (including availability, waiting time and responsiveness), fault freeness (including physical items, information and advice) and flexibility (ability to recover from mistakes, to customise the service or add additional services). The soft dimensions are style (attitude of staff, accessibility of staff, and ambience), steering (the degree to which customers feel in control of their own destiny) and safety (trust, security and confidentiality).

The literature on service quality characteristics seems to be more comprehensive and substantiated than the product quality characteristics identified in the operations literature. Three points can be made:-

- 1) Serious attempts have been made to identify service quality characteristics (for example Parasuraman et al 1985 and Johnston et al 1990).
- 2) There is some empirical underpinning of some of the service quality characteristics (for example Parasuraman et al 1985 and Johnston et al 1990).
- 3) Most of the sets of service characteristics above include product type characteristics suggesting that

service quality is seen to be the combination of the quality of products and services.

The literature still leaves some seemingly important issues largely unresolved:-

- 1) Are the sets of characteristics complete and/or comprehensive?
- 2) Some factors are likely to be more important than others, how does one assess the relative importance of individual factors?
- 3) If satisfaction is the result of the impact of all of the factors (Johnston and Lyth 1989) how do they individually interact to form an overall view of satisfaction in the customer's mind?
- 4) Is it more appropriate to have a long list of relatively precise factors or a short list of generic factors?
- 5) Are the factors the same for all organisations or will they vary from organisation to organisation

3) SERVICE QUALITY MEASUREMENT

It is difficult to conceive of a system for measuring quality without an understanding and identification of the factors that can be measured. Following on from the work in identifying the quality factors, a number of attempts have been made to create service quality measurement instruments. The most well known is SERVQUAL and is based upon Berry et al's five consolidated dimensions of service quality.

The SERVQUAL instrument

In their 1985 paper at the end of phase I, Berry et al outlined their phase II agenda. Their stated objective was "to devise appropriate rating scales to measure consumers' perceptions with respect to each statement, and to condense the set of statements to produce a reliable and comprehensive but concise instrument" (Parasuraman et al, 1985).

SERVQUAL was the result. It is "a concise multiple-item scale questionnaire with good reliability and validity that companies can use to better understand the service expectations and perceptions of their customers"

(Parasuraman et al, 1988). It is an instrument which has been designed to be applicable across a broad spectrum of services" (Zeithaml et al 1990). The instrument itself is a skeleton questionnaire that asks questions of

customers about their expectations of excellent service and their perceptions of the services of a particular company. It encompasses their five consolidated dimensions with 22 items for perceptions and 22 for expectations using a seven point Likert scale. A perception gap score is then calculated for each pair of statements (expectations and perceptions), the difference being the SERVQUAL score. Different questions relate to the different dimensions which can be then be aggregated and averaged to identify perception gaps for each dimension. The scores can also be weighted by getting customers to add in weights to each dimension. Repeated administration allows a understanding as to how customers' perceived service quality with each of the dimensions is changing over time. The authors also suggest that the instrument can be used to track competitors and thus compare one service organisation's performance against its competitors.

Parasuraman et al reviewed their instrument in a paper in 1991 when they revealed that in the average score on expectations was 6.22 on the seven point scale. They decided to amend some of the words from the "should" terminology as "it might be contributing to unrealistically high expectation scores". One might argue that part of the reason for the high score is the use of the word "excellent". The instructions at the beginning of the survey ask "Based on your experiences as

a consumer of XXX services, please think about the kind of XXX company that would deliver excellent quality". This seems to imply the comparison of perceptions not with expectations but with some ideal standard. The word "excellent" remained after their review.

The SERVQUAL instrument has been widely used and, the authors claim, widely validated. The authors provided several supporting examples in their 1991 paper. Their instrument has indeed many supporters, for example Haynes and DuVall (1992) endorsed SERVQUAL and in particular the use of a continuous scale "Measurement of quality on a continuous scale (variable) does not appear to be a common technique. Generally service quality is viewed more with respect to an attribute-scale, that is the service delivered is either good or bad".

There are also some detractors for example Carman 1990, Haller 1991, Finn and Lamb 1991, Andersson 1991, Cronin and Taylor 1992, McDougall and Levesque 1992, Taylor et al 1992. Haller (1991) for example, used SERVQUAL and felt "As there are no restrictions for customer expectations, they tend to choose the lowest possible values in almost every statement. On the other hand service receivers mark the middle or high values when asked for their judgement of actual service perception" as a result perception minus expectation values are almost always negative. (Haller seems to have the scales

reversed as his comments are not consistent.)" Finn and Lamb (1991) stated that "data gathered regarding different types of retail stores did not fit the SERVQUAL measurement model".

Andersson (1991) was impressed by the instrument and the activities of the team which had "amassed an impressive amount of empirical evidence from their 1,936 customers who responded to their questionnaire, and the insights from the 12 focus group discussions ... but they violate the principle of scientific continuity". Andersson was concerned that they seem to ignore economic theory which might consider enhancing the value of the service only if the value of marginal improvement was less than the marginal cost. Berry et al do not address the cost issue. Andersson was also concerned about the use of the Likert scale. He claimed "they are now at the absolute end of the street". He was worried that these statistical methods do not allow the investigation of correlations and interdependencies. Andersson was also concerned about the lack of psychological underpinning of their work and argued that fundamental concepts such as the perception of quality should be grounded in psychology. For his way forward he quoted Garvin (1988) "There is a clear need for more precise measures of quality ... analysts need to determine if the various dimensions of quality move together or separately .. focus on the determinants of customer satisfaction,

consumer perceptions of quality, and the relative importance of the various dimensions of quality in shaping buyer behaviour".

Some other quality measurement activities

There have been other attempts to measure quality, including Andersson who proposed a cause and effect model. The most notable attempts, however, have been made by Fitzgerald et al (1991) and Collier (1988 and 1991). In a conference paper in 1988 (later appearing as a published paper in 1991) Collier explained his approach which involved the use of a "service quality map" created by flowcharting the service process then applying multi-variate data analysis techniques to describe the integrated relationships and their effect on perceived service quality. This technique is also widely used in the consumer behaviour literature to understand the links between expectations, attitude, purchase intentions and satisfaction (see for example Churchill and Surprenant 1982 and Teel 1983).

Fitzgerald et al (1991), following analysis of the control systems of ten large UK service organisations, used an input-process-output approach identifying the measures and mechanisms that are, and therefore might be, used at each stage by professional, service shop and mass service organisations.

All of these instruments break quality down into a number of component parts and then, all but Fitzgerald et al, seek to establish an expectation versus perception score for each factor. The SERVQUAL instrument, in particular, aggregates the scores on the basis of a weighting given by customers. What seems to be missing from the literature, however, is an understanding of how all the effects of the various factors aggregate in the customer's mind into a feeling of satisfaction or dissatisfaction. Is it just a simple weighting process, or could there be instances where a failure in one factor completely overrides all the success and satisfaction in another? Whilst the literature has gone some way into understanding the determinants of service quality, it is not clear how they relate to satisfaction and dissatisfaction.

4) GAP ANALYSIS

A number of models have been proposed which try to identify ways in which managers might ensure a fit between expectations and perceptions. The first was proposed by Parasuraman et al (1985).

Parasuraman et al's gap model

Parasuraman et al (1985) developed the concept of the gap between expectation and perception into a service gap model. They identified four service quality gaps which individually or collectively will contribute to the fifth gap; a mismatch between customer perceptions and customer expectations. The purpose of their model (from Zeithaml et al, 1990) shown in figure 4.9, is to help managers analyse the sources of quality problems and understand how services can be improved.

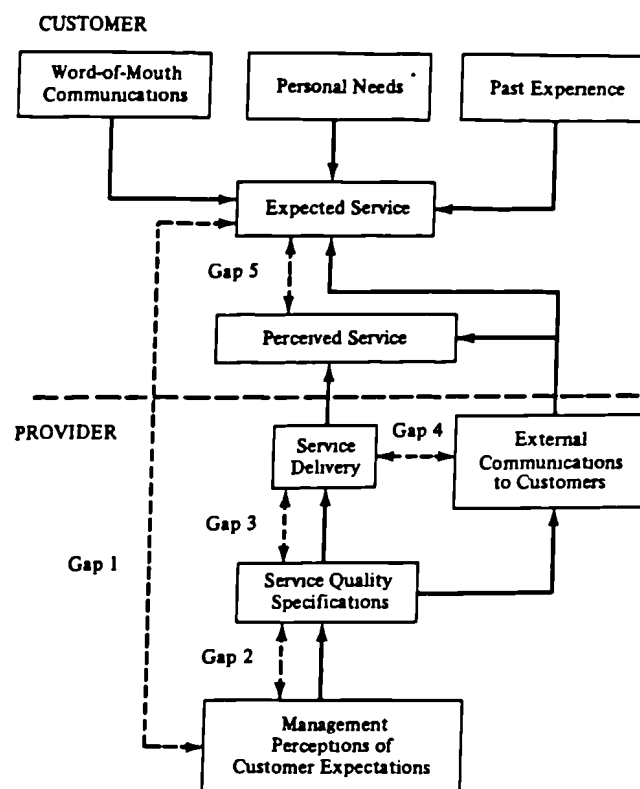


Figure 4.9 The service quality model

The top part of the model depicts the customer and the bottom the provider or organisation. It is interesting to note that in their first edition of the model in 1985, Parasuraman et al entitled the bottom half of the diagram "marketer". Their amended version in 1990 uses the word "provider" acknowledging a wider involvement in the task of managing quality. Indeed, one of the boxes in their diagram is entitled "service delivery"! They seem to have gone some way towards Grönroos' view that "Quality cannot be separated from production and delivery" (1990).

In the top half of the diagram, customers' expected service is shown to be a function of their personal needs and past experience and communications, both word of mouth and the external communications of the organisation (from below the line). The perceived service is the result of the service taking place and related to the experience of the customer. The gap between these is the source of satisfaction or dissatisfaction. The service delivery is undertaken by the provider. Management's perceptions of customer expectations guide the decisions about the service quality specification which is then translated into the delivery of the service.

The five gaps Parasuraman et al identified from their phase I focus group interviews were:-

- gap 1 - the management perception gap: management not knowing what customers want
- gap 2 - the quality specification gap: using the wrong service quality standards
- gap 3 - the service delivery gap: the inability or unwillingness to perform at the desired level
- gap 4 - the external communication gap: when promises do not match delivery
- gap 5 - the gap between customers' expectation and perceived service.

Brown and Swartz (1989) used the model in professional service firms and concluded that it is "a straightforward and appropriate way to identify inconsistencies between provider and client perceptions of service performance".

Other gaps have been suggested to refine the model. For example Brogowicz et al (1990) identified information and feedback related gaps. They also suggested that a quality gap can exist even "when a customer has not yet experienced the service".

Zeithaml et al (1990) extended the gap model more recently to try to identify the causes of the gaps. Their extended model is shown in figure 4.10.

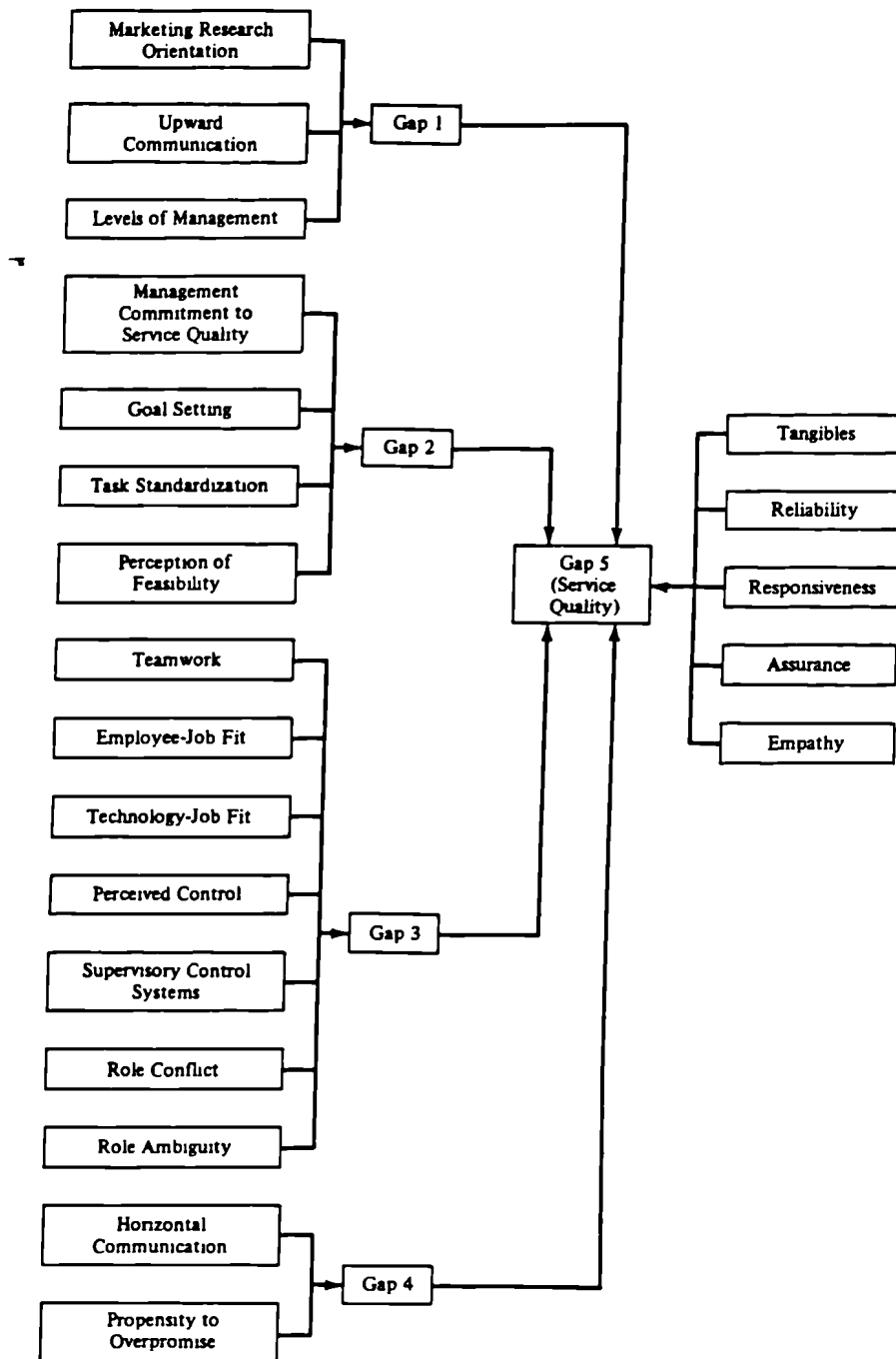


Figure 4.10 The extended gaps model of service quality

Other gap models

Two other models which try to identify the causes of the expectation perception gap came from the Nordic School. Gummesson and Grönroos (1987) provided the Gummesson-Grönroos model, see figure 4.11, which identifies the different contributions made to quality by design, production, delivery and the relations of the employees of the seller and buyer.

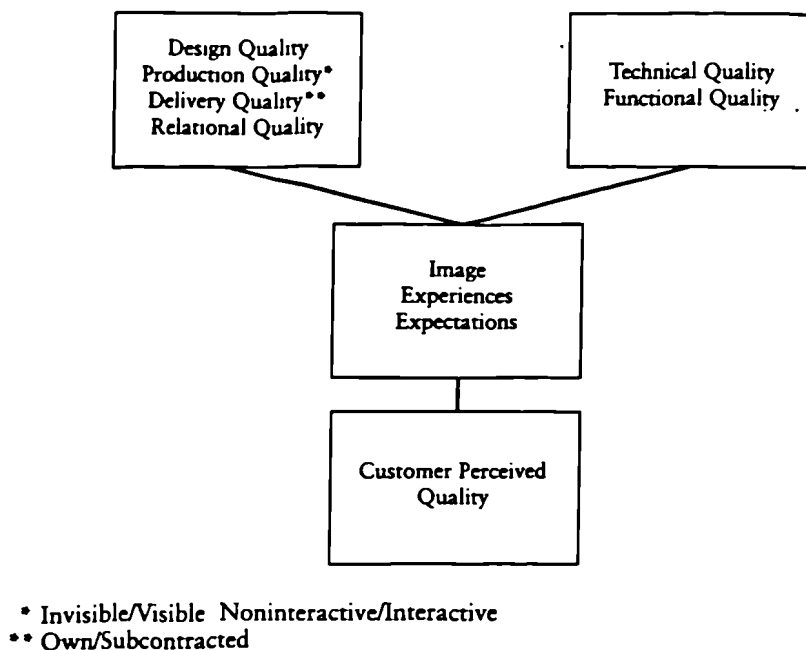


Figure 4.11 The Gummesson-Grönroos quality model

Grönroos in 1990, provided what seems to be a combination of the gap model and the way organisations can deal with the gaps in his service quality management framework (see figure 4.12).

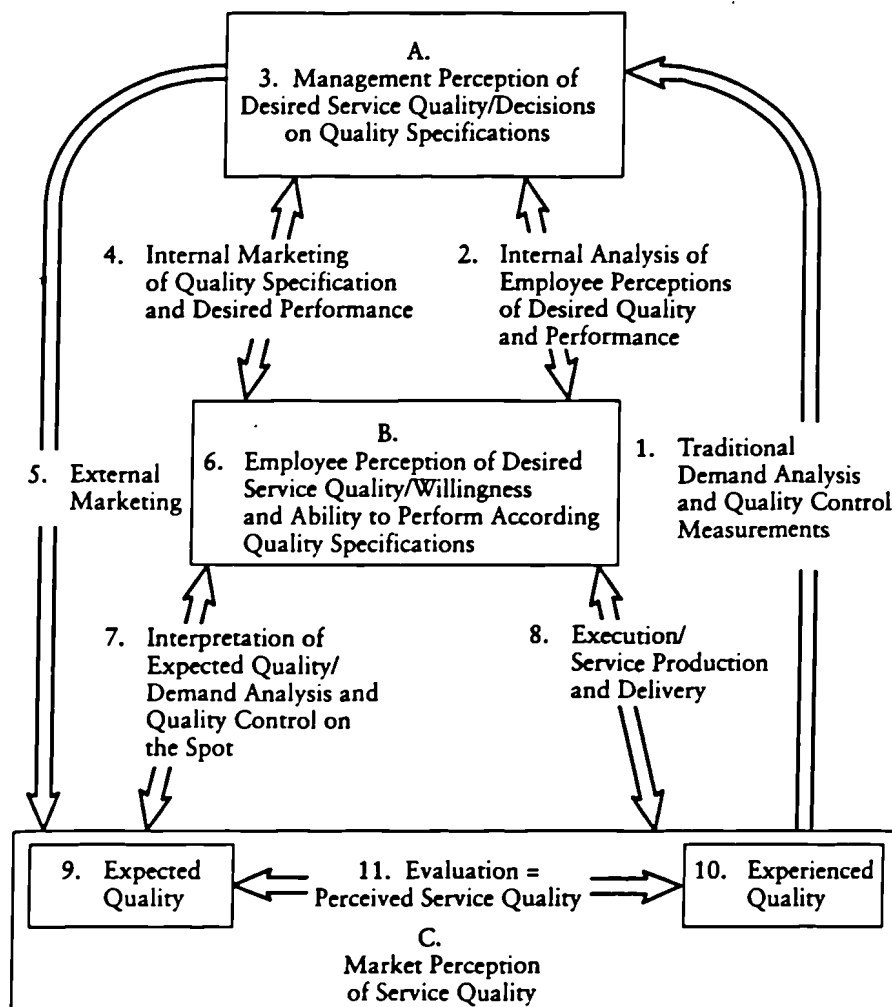


Figure 4.12 A service quality management framework

These Nordic and North American approaches have been combined into a synthesized service quality model (Brogowicz et al 1990). This model recognised the iterative nature of expectation and perceptions; that customers' experiences will affect their subsequent expectations and perceptions of service, see figure 4.13.

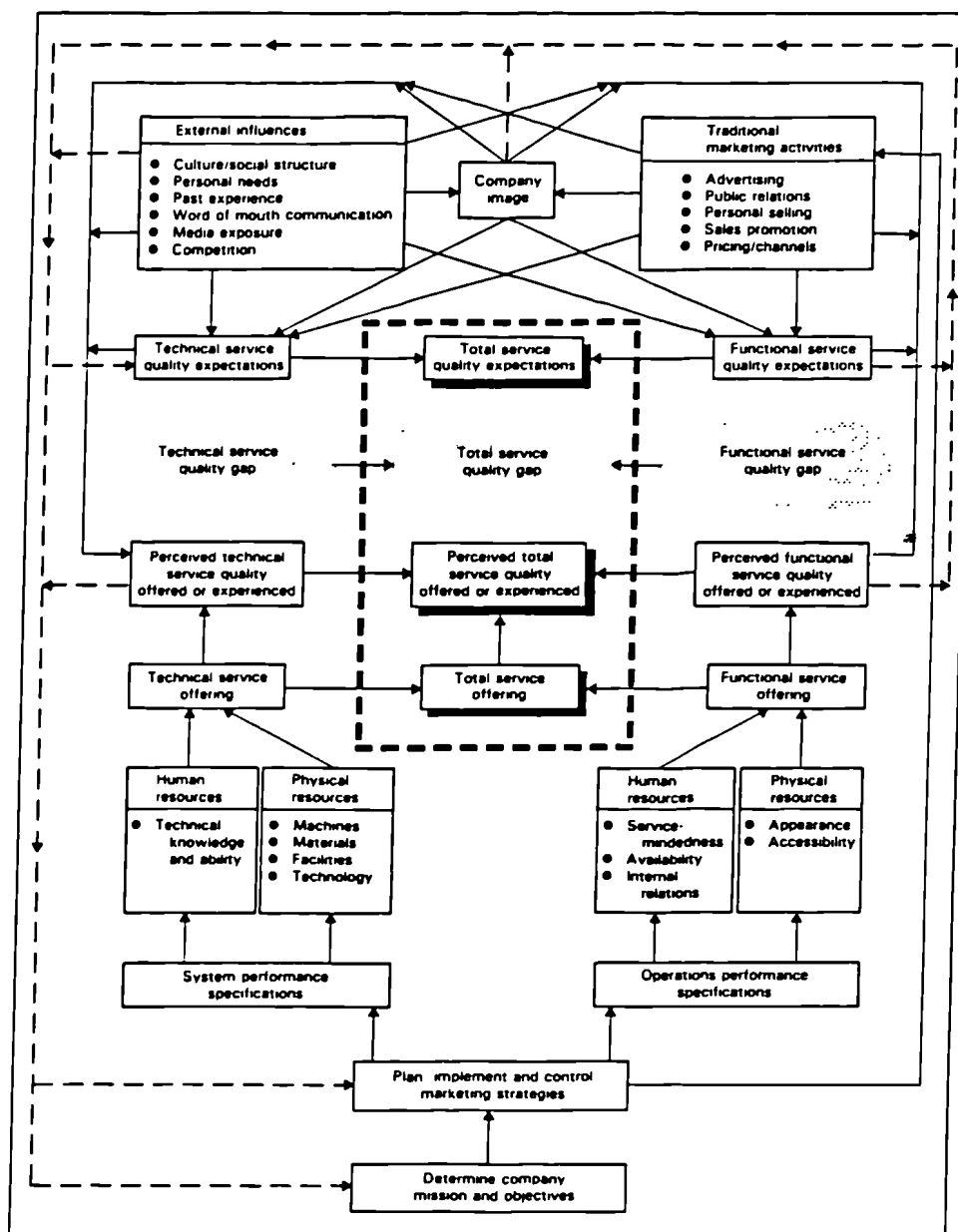


Figure 4.13 The synthesized service quality model

Several models have been proposed to help managers understand how to minimise and manage the gaps that result in poor perceived service quality (for example Parasuraman et al 1985, Gummesson and Grönroos 1987 and

Brogowicz et al 1990). However, they all based on a single common idea, that the perception-expectation gap is central to customer perceived service quality (for example Parasuraman et al 1985 and Grönroos 1990). Whilst all authors seem to recognise the role of marketing in the managing expectations part of the models, only a few (see for example Brogowicz et al 1990 and Grönroos 1990) recognise the role of operations in influencing customers' perceptions of the service and the development of their expectations for future encounters.

There are two questions that arise from the proposed models:-

- 1) Are there other important gaps?
- 2) The models (with the exception of Brogowicz et al), show the perception-expectation gap as a result of other events not a process (compare to Johnston's CPO model, 1987). While the models may identify some of the contributors to customer perceived service quality and how they might be improved over time, they provide only a partial insight as to how customers bring their various experiences together during the process of delivery to decide whether the experience was satisfactory or not. This maybe demonstrates the lack of psychological underpinning raised by Andersson (1991).

5) RECOVERY

The concept of service recovery has only recently entered the service management literature. However, this is an important issue for customer satisfaction as the purpose of a recovery procedure is to turn a potentially dissatisfying experience into a satisfying one. In 1985 Berry et al, although not using the term recovery, suggested that service quality is of two types. First there is the quality level at which regular service is delivered and second there is the quality level at which exceptions or problems are handled. In order to deliver good service quality they claimed both need to be achieved. They also add that even a low contact firm becomes high contact when a problem occurs.

While much of the manufacturing and service literature has been concerned with "doing it right the first time" (see preventative approaches to quality chapter two), there has been a movement, in the last few years to consider "doing the service very right the second time" (Berry and Parasuraman 1991).

Service failure

Schroeder (1989) explained (in chapter two) that when we attend a concert we do not expect a soloist to play a certain percentage of bad notes. It is likely, however,

that there will be a few bad notes in the whole of the concert. As Hart et al (1990) stated "Mistakes are a critical part of every service errors are inevitable".

Zemke and Schaaf (1990) criticised service managers for not accepting and recognising this. "A blind spot in many service delivery systems is that they fail even to anticipate that something can go wrong. In production management, allowance is made for breakage, spoilage and duds that simply don't meet the specs". They claimed that product manufacturers have (usually) systems in place to find and remove and modify such items, either in the factory or through support and repair facilities in the field. "Service systems" they claimed "on the other hand are managed as though anything other than perfection is inconceivable".

Brandt and Reffett (1989) suggested that it is only when poor service occurs that customers become aware of service quality. "It is only when they experience problems that customers give service quality any attention at all". It should be noted that they do not say that the customer may become dissatisfied, but, just aware of poor quality (highlighting the difference between perceived service quality and customer satisfaction). Service failure as Hart et al (1990) explained may not necessarily result in customer

dissatisfaction. In many situations customers accept that services do break down. This was supported by an empirical study carried out by Feinberg et al (1990). In these circumstances it may not be the breakdown that leads to dissatisfaction but the company's response to the breakdown. The crucial point is that whilst mistakes may be inevitable "dissatisfied customers are not" (Hart et al 1990).

"While companies may not be able to prevent all problems, they can learn to recover from them. A good recovery can turn angry, frustrated customers into loyal ones" (Hart et al 1990). Berry and Parasuraman (1992) suggested that organisations should see failure not necessarily as a problem but as an opportunity to create satisfied customers. "Breakthrough" service organisations, according to Heskett et al (1990), are those which have recovery systems in place. They believed that an effective response to service failure may have a high-payoff in terms of the long term success of the organisation and also sends positive signals to customers and employees about the company's policy to encourage corrective action and to achieve high customer satisfaction. It is the company's service recovery systems (or the lack of them) that may become a source of satisfaction or dissatisfaction (Bitner et al 1990), not necessarily the mistake or failure itself.

Davidow and Uttal (1989) identified the problems of not dealing with failures "Customers, we found, are searching for opportunities to get even. They don't tell the retailers, manufacturers and service providers that they have served them poorly - they tell their friends and colleagues. As the bad word passes along, it creates a time bomb".

Service recovery

Service recovery has been used as the expression to seek out and deal with service failures. The word "recovery", in the service sense, originated from British Airway's "Putting the Customer First Campaign" (Zemke and Schaaf, 1990). Donald Porter, the consultant involved with BA (reported in Zemke and Schaaf 1990) stated "It had never occurred to us in any concrete way. 'Recovery' was the term we coined to describe a very frequently repeated concern. If something goes wrong, as it often does, will anybody make special efforts to get it right? Will somebody go out of his or her way to make amends to the customer? Does anyone make effort to offset the negative impact of a screw-up?"

Zemke and Bell (1989) further suggested that service recovery does not just mean "return to a normal state" but to a state of enhanced perception. "All breakdowns require the deliverer to jump through a few hoops to get

the customer back to neutral. More hoops are required for victims to recover".

A few authors have identified some ways to deal with breakdowns. Shostack (1984 and 1987) recommended blueprinting the service in order to identify and remove fail-points. Schlesinger and Heskett (1991) supported this idea. They contended that many service failures are not failures but have been designed into the service system. They suggested that *the first activity is to improve service design to remove the possibility of failure.*

Zemke and Bell (1989) believed that it is important to recognise that all customers "have recovery expectations that they want organisations to meet". Recovery, they said, needs to be a planned process. So organisations need to design appropriate responses to failure linked to the cost and the inconvenience caused by the failure to the customer that will meet the needs and expectations of the customer. Such recovery processes need to be carried out either by empowered front-line staff or trained personnel who are available to deal with recovery in a way which does not interfere with day to day service activities. Their principles for recovery include acknowledgement, apology, empathy, information, action, atonement and follow-up. Bell and Zemke (1987) earlier suggested that recovery needs to be implemented at two

levels corresponding to whether the customer feels annoyance or victimised as a result of the failure.

Service recovery is now seen to be an important opportunity to create satisfaction rather than an "expensive nuisance" (Berry and Parasuraman 1992). It also highlights the difference between service quality and satisfaction by the notion that poor perceived service quality may not necessarily result in dissatisfaction (Hart et al 1990 and Bitner et al 1990). When things do go wrong it is the organisation's response to the failure that results in satisfaction or dissatisfaction (Bitner et al 1990).

There are three main questions that arise out of the recovery literature that do not appear to have been satisfactorily covered:-

- 1) What do organisations have to do to "recover" a customer and turn poor perceived service quality into satisfaction?
- 2) What is the point at which a person moves to a state of feeling satisfied or dissatisfied?
- 3) Is there a "switch" that leads to a feeling of satisfaction or dissatisfaction?

Service failure and recovery was identified as one of the key areas for service management research (Brown 1992).

CONCLUSION

Service quality is an important competitive weapon for some organisations (Buzzell and Gale 1987, Humble 1989, Zeithaml et al 1990 and Fitzgerald et al 1991). However, it can be difficult to define and provide due to:-

- 1) the intangible nature of services (Cowell 1984)
- 2) the problems with service specification (Heskett 1987 and Haywood-Farmer and Nollet 1991)
- 3) the problems of measurement (Sasser et al 1987 and Zeithaml et al 1990)
- 4) the fact that service quality is perceived by the customer (Grönroos 1984 and Berry et al 1985)

The literature, however, has dealt, to some extent, with all of these points.

Service quality is seen to be, predominantly, a combination of both product and service (the more intangible) attributes. Many characteristics have been

derived by several authors to specify service quality (see for example Parasuraman et al 1985 and Johnston and Silvestro 1990).

Having identified service quality characteristics, some authors have attempted to develop systems to measure both the intangible and tangible parts of the service (see for example Parasuraman et al 1988, Collier 1988 and Fitzgerald et al 1991). The authors claim that these factors are generic and applicable to all service situations, though there has been some questioning of the consolidated dimensions.

There is the central notion that service quality is based on a customer's point of view (see for example Grönroos 1990 and Gummeson 1991). This supports the "traditional" marketing user-based quality perspective. This underpins the notion of customer perceived service quality (see for example Berry et al 1991, Gummeson 1987, Parasuraman et al 1985). The critical point is that the discussion of service quality centres around *perceived* quality and not the "actual" or operations view of quality. Customer perceived service quality has been defined as the degree of fit between customer expectations and their perceptions of the service provided (Grönroos 1984). This indicates the key roles for both marketing (in managing expectations before the service encounter) and operations (in managing the

perceptions of service during the encounter).

Furthermore, customer perceived service quality may be different from the level of service quality that the organisation, its marketers or its management believes that it provides (Parasuraman et al 1985).

A negative mismatch between customers' expectations and their perceptions of the service received does not necessarily result in customer dissatisfaction as the organisation's recovery activities can turn service perceived to be poor into satisfaction (Hart et al 1990) see figure 4.14.

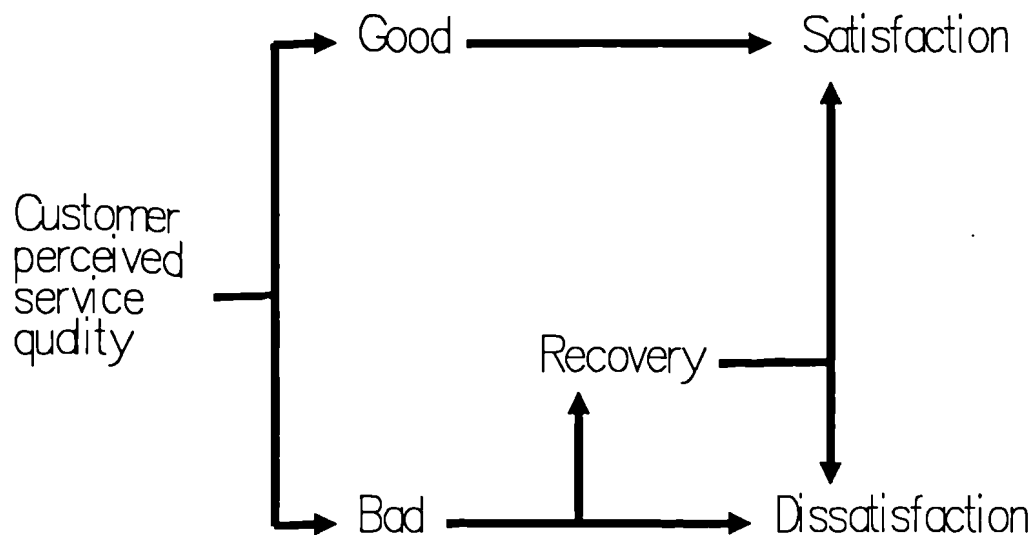


Figure 4.14 The outcomes of customer perceived service quality

It appears that, from the service management literature, customer satisfaction is the result of customer perceived service quality and is related to the size and direction of the expectation-perception gap (see for example Berry et al 1985 and Johnston and Lyth 1991)

Some outstanding issues remain:-

- 1) How do the dimensions interact and combine to create the feeling of satisfaction or dissatisfaction?
Some authors have accepted the need for weighted measurements (Johnston and Lyth 1991 and Zeithaml et al 1990) but is this enough?
- 2) Are there only two outcomes on the satisfaction continuum, satisfaction and dissatisfaction? If perceptions are less than expectations then customers may be dissatisfied. If perceptions are greater than expectations then they are satisfied, but is this the same state as created by perceptions matching expectations?
- 3) Although there is a recognition that the provision of customer perceived service quality is the joint responsibility of marketing and operations, the literature does not seem to bring the two different roles together.

- 4) The service quality literature lacks underpinning from other disciplines, including economics, philosophy and psychology.

Hanscombe and Norman (1991) argued that the successful companies of the 1990s will be those that gain a thorough understanding of emergent customer needs. They believed that many customers put overall satisfaction as more important than the satisfaction of the core product or service. They contested that satisfaction is inspired by the total product/service "experience". Service providers must be aware of not only what satisfies the client, but also what do they have to do to achieve the levels of activity that lead to satisfaction. This underpins the joint responsibilities of marketing and operations to manage the outcome of the service delivery; the point where the perceptions (created to some extent by marketing activities) and the activities of the operation in managing expectations meet to create satisfaction or dissatisfaction in the minds of the customers. The customer and the cause of his or her feelings of satisfaction or dissatisfaction may be the key to understanding not only service quality but also the joint and respective roles of marketing and operations. Satisfaction and dissatisfaction is the subject of the next chapter.

Chapter 5

SATISFACTION AND DISSATISFACTION

SUMMARY

The objective of this chapter is to review some of the consumer behaviour literature. In doing so it finds some similarities and extensions to the service quality literature.

Over the last two or three decades a considerable amount of work has been generated on the satisfaction/dissatisfaction construct. Authors seem to be agreed that satisfaction and dissatisfaction are important topics for managers from many functions as they have a significant bearing upon customers' future purchase intentions and word-of-mouth publicity.

The disconfirmation theory has been widely used in satisfaction research though only more recently applied to services. There are three outcomes from disconfirmation; positive, negative and indifferent feelings toward the product or service experience. There is some debate as to whether satisfaction is an attitude, and an emotive or cognitive response.

The standards customers use to evaluate perceived product or service performance are far from clear with suggestions ranging from ideal to minimum tolerable. It is suggested that the type of pre-experience comparison standard depends upon the use situation.

There is agreement in the literature that there is some similarity between service quality and satisfaction. The emergent theme is that satisfaction is transaction specific and service quality a more global attitude.

INTRODUCTION

There is an established body of knowledge in the consumer behaviour literature which concerns satisfaction and dissatisfaction. The objective of this chapter is to review some of the consumer behaviour literature that focuses on customer satisfaction and dissatisfaction in order to understand the nature of satisfaction and dissatisfaction and throw some light on the difference between satisfaction and service quality.

By way of introduction, the first section identifies some of the work in the consumer research area, particularly customer satisfaction. The importance of customer satisfaction and its development over the last thirty years is briefly described.

The second section identifies some of the consumer satisfaction models but spends most time reviewing the literature covering the development, evaluation and use of the disconfirmation theory. This appears to be the central model for understanding how satisfaction or dissatisfaction emerges from the purchase process.

The third section reviews the nature of satisfaction and its definition, and explores the difference between service quality and satisfaction, and the levels of satisfaction.

CONSUMER RESEARCH

This section defines consumer research and reviews the importance of customer satisfaction and its development into a key topic in the consumer behaviour literature.

Consumer research is the study of consummation (Holbrook 1987). It is primarily concerned with investigating consumer behaviour. This Wilkie (1986) defined as "the activities people engage in when selecting, purchasing and using products and services so as to satisfy needs and desires. Such activities involve mental and emotional processes, in addition to physical actions". Holbrook (1987) defined it more simply as involving "activities aimed at achieving goals, fulfilling needs, or satisfying wants". Consumer behaviour is motivated by a need to satisfy needs and desires, it is a decision process, from prepurchase, to purchase, to post purchase and it is influenced by individual differences, for example attitudes, knowledge, motivation and involvement and external factors for example culture, family, marketing and situational effects (Wilkie 1986, Engel et al 1993). It is an applied and multi disciplinary field which has borrowed, and been based upon, several disciplines; economics, psychology, sociology, anthropology and philosophy (see for example Schiffman and Kanuk 1983, Derbaix and Vanden Abeele 1985, Belk 1986, Holbrook 1987).

There appear to be two forms of psychological processes that customers experience following a purchase; cognitive dissonance and customer satisfaction/dissatisfaction (Wilkie 1986). The thrust of cognitive dissonance theory is that dissonance (a cognition of inconsistency) is likely to occur after a choice has been made because a choice has been made. As dissonance may produce unpleasant feelings or psychological discomfort, the consumer may be motivated to reduce the total amount of dissonance that is being experienced. Whilst cognitive dissonance is a popular and yet controversial psychological theory (see for example, Festinger 1957, Brehm and Cohen 1962, Aronson 1968), the subject of this review is satisfaction and dissatisfaction.

Much of the work in the consumer satisfaction area of consumer research, not unlike other disciplines and functions, has until recently been predominantly concerned with the consumption of *products* (see for example Swan and Combs 1976, Jacoby 1978, LaTour and Peat 1979, Oliver 1980, Churchill and Surprenant 1982, Holbrook and Hirschman 1982, LaBarbera and Mazursky 1983, Tse and Wilton 1986, Halstead 1989). Only a small amount of the literature is concerned with consumer satisfaction in services. As Jayanti and Jackson (1991) stated "work in services is rare". Some notable examples would include Day 1978, Hill 1986, Cadotte and Turgeon 1988,

Kolodinsky and Aleong 1990, Bolton and Drew 1991, Sirdeshmukh et al 1992, Swan 1992 and Wirtz and Bateson 1992.

The importance of customer satisfaction

The consumer behaviourists believe that consumer satisfaction and dissatisfaction is a topic in which operations managers, marketers, human resource managers, strategists and financial managers have an interest (see for example Wilkie 1986 and Engel et al 1993). While marketers strive to create satisfied customers, operations are responsible for the internal processes that deliver services, human resources frequently are responsible for that delivery and the result is the support of strategic and financial goals. Furthermore, satisfaction is of interest to customers as it means they are not only obtaining the benefits they seek but also satisfaction provides a pleasant feeling. Indeed, there is a view that product or service quality lies at the heart of satisfaction and dissatisfaction and that customer satisfaction is the key to customer retention (Engel et al 1993) and to the long term viability and success of the organisation (Wilkie 1986).

It is widely accepted in the consumer behaviour literature that customer satisfaction (with a product) is a significant determinant of repeat purchases, brand

loyalty, acceptance of other products in the same product line, and favourable word-of-mouth publicity (see for example Cardozo 1965, Churchill and Surprenant 1982, Bearden and Teel 1983, LaBarbera and Mazursky 1983). Conversely, customer dissatisfaction is also assumed to have an impact on brand avoidance, brand switching, negative word-of-mouth, complaining and redress seeking (Wilkie 1986). Several studies of dissatisfaction show its effect on customers' intentions and future purchases (see for example Day 1978, Bearden and Teel 1983, Day 1984, Halstead 1989).

If these assumptions are correct, then knowledge about the factors affecting customer satisfaction and dissatisfaction is important not only to marketers but also to operations, finance, human resource managers and strategists.

It is somewhat surprising then that the consumer behaviour literature is referenced little in the service management literature and hardly ever by the service operations management literature. Table 5.1 shows the number of references made to the consumer behaviour literature by Grönroos (1990) and Berry and Parasuraman (1991) representing the service management literature and Collier (1987) and Heskett et al (1990) representing the service operations literature.

	No. of refs to CS/D	Total no. refs	%
SERVICE MARKETING			
Grönroos (1990)	2	222	1%
Berry & Parasuraman (1991)	4	158	2%
SERVICE OPERATIONS			
Collier (1987)	0	87	0%
Heskett et al (1990)	1	236	0.5%

Table 5.1 Reference to the consumer satisfaction and dissatisfaction (CS/D) literature in the service management and service operations literatures

Could it be that not only is there geographic parochialism but also subject parochialism.

Increasing interest in customer satisfaction

The area of consumer satisfaction is a rapidly growing area of consumer behaviour. It is claimed that the first work in this area was undertaken by Cardozo in 1965 (Oliver and DeSarbo 1988), though it seems that little was done in the following ten years. Swan and Combs noted in 1976 "Even though knowledge of the processes that may determine consumer satisfaction should be of interest to marketing theorists and practitioners, the topic has received little attention in the literature".

By the late 1970s this had changed. Specific interest in consumer satisfaction and dissatisfaction was spurred by a conference held in 1977, organised by Keith Hunt and Ralph Day (Brigham Young University, Utah). This became a bi-annual conference, and the proceedings published by the Marketing Science Institute. The proceedings evolved into the Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behaviour in 1988, though the yearly issue primarily contains the proceedings of the conferences.

By 1983 several studies had been undertaken (see later) and satisfaction had moved from a little developed and discussed concept to occupying "a central position in marketing thought and practice" (Churchill and Surprenant 1982). Bearden and Teel (1983) stated "Consumer satisfaction is now regarded as a critical construct in consumer behaviour. Though it was maybe not as central or critical as they believed as one particular text by Schiffman and Kanuk (1983) was notable by the absence of any discussion of consumer satisfaction.

By the 1990s discussion of satisfaction is found in all the main consumer journals and texts. "Consumer satisfaction is recognised as a key variable in models of consumer behaviour and occupies a central position in the marketing concept" (Jayanti and Jackson 1991).

MODELS OF CONSUMER SATISFACTION

This section identifies some of the models used to understand customer satisfaction, in particular the expectancy disconfirmation theory.

In 1965 Cardozo brought together two branches of psychological theory, "contrast" theory and "dissonance" theory, to provide the basis for making specific statements about consumer satisfaction and in particular the relationships between effort, expectation and evaluation. "Contrast theory implies that a customer who receives a product less valuable than he expected will magnify the difference between the product received and the product expected. Even if this original expectation were to change, he would still be free to compare unfavourably the product with better ones" (Cardozo 1965). The result of this process is not only that customers' expectations would be negatively disconfirmed, but further, that disappointed customers will magnify the difference (Spector 1956, Cardozo 1965).

Cardozo commented that Festinger's theory of cognitive dissonance (1957) might lead one to predict the opposite effect. "Dissonance theory would imply that a person who expected a high-value product and received a low-value product would recognise the disparity and experience cognitive dissonance". Dissonance is aroused in this case because receiving a low-value product is not

consistent with having expected a high value product. This difference would put pressure on the individual to reduce perceptions. Cardozo reconciled these two conflicting notions by the addition of another variable, the effort that the consumer spends in the situation, or the perceived relative importance of the product by the customer. Both outcomes, he claimed, are possible, however it is the importance of the product in the customer's eyes will affect the level of dissatisfaction. (Cardozo supported this with the results of a number of experiments with 107 students from the University of Minnesota).

Based on Cardozo's work, various models have been used and developed over the last ten years to explain the satisfaction/dissatisfaction construct. They include attribution models (see for example Oliver and DeSarbo 1988), affective models (Westbrook 1987), equity models (Woodruff, Cadotte and Jenkins 1983), multiple process models (Tse and Wilton 1988), the perceived performance model (LaTour and Peat 1979) and the expectancy disconfirmation model (Oliver 1980).

A brief comparison of these models is contained in Erevelles and Leavitt 1992. They concluded from their review that "it is still not very clear which paradigm may best model consumers' satisfaction/dissatisfaction judgements in various situations". The most widely used

and accepted paradigm, however, is the expectancy/disconfirmation theory (see for example Woodruff et al 1985, Swan 1988, Tse and Wilton 1988, Oliver and DeSarbo 1988, Cooper et al 1989, Vezina and Nicosia 1990, Bolton and Drew 1991, Mattsson, 1991).

EXPECTANCY DISCONFIRMATION THEORY

The expectancy disconfirmation theory (disconfirmation theory) has roots in social psychology and organisational behaviour (Oliver and DeSarbo 1988). It is basically two processes "consisting the formation of expectations and the disconfirmation of those expectations through performance comparison" which results in an emotional reaction; satisfaction or dissatisfaction (Cadotte et al 1987).

The disconfirmation paradigm holds that satisfaction is related to the size of the disconfirmation experience, where disconfirmation is related to the person's initial expectations (Churchill and Surprenant, 1982). More specifically an individual's expectations are:-

- 1) confirmed when a product performs as expected
- 2) negatively disconfirmed when the product performs more poorly than expected

- 3) positively disconfirmed when the product performs better than expected (Churchill and Surprenant, 1982)

Satisfaction is thus hypothesized to be a function of expectations, performance and disconfirmation.

The development of the theory

Until 1980 there was "little evidence ... to support the seemingly obvious conclusion that satisfaction increases as the performance/expectation ratio increases " (Oliver 1980).

1) Oliver's model 1980

In 1980 Oliver reported the development and test of a model encompassing interrelationships among three components; expectations, disconfirmation and satisfaction. Figure 5.1 is Oliver's original model depicting the relationship between expectations, disconfirmation, satisfaction and intentions.

Oliver was thus the first to demonstrate that "postusage ratings of satisfaction appear to be a function of a linear combination of an adaptation level component (expectations or prior attitude) and disconfirmation".

Though he admitted that his sample frame was rather small and "remains a source of potential error".

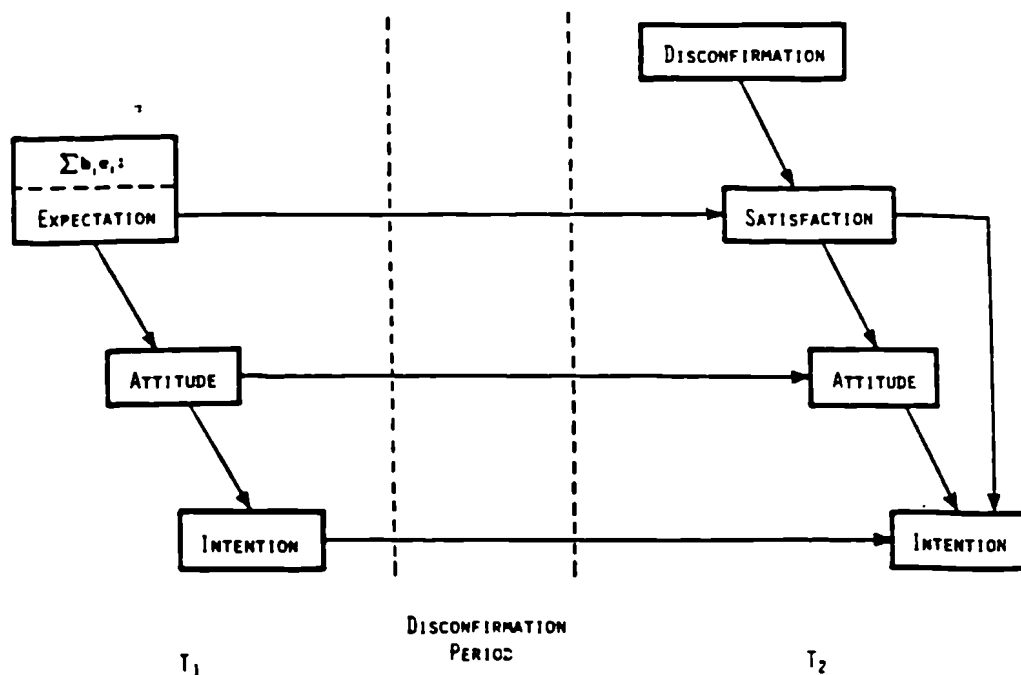


Figure 5.1 Oliver's model

Oliver's model has been widely used since. Several studies (mostly product related) have concurred that expectations and disconfirmation are related positively to satisfaction and to customers' future intentions to purchase (see for example LaTour and Peat 1979, Oliver 1980, Bearden and Teel, 1983, Woodruff et al 1985).

There have been many criticisms and developments of Oliver's original model. These are briefly discussed in sections 2 to 8 below.

2) Non-linearity of the relationship

Dagenais and Duhaime (1992) contested that a simple linear model (as Oliver suggested) is not sufficient to analyse the relationship. Their exploratory study proposed several types of relationships and concluded that a definitive form functional relationship should not be imposed between satisfaction and expectations.

3) Investigations of the linkages

Other studies have investigated particular linkages for example:-

- * disconfirmation and post purchase consequences
(LaBarbera and Mazursky 1983, Halstead 1989)
- * complaint activity and disconfirmation (Bearden and Teel 1983)
- * the effect of customer tolerance after
disconfirmation (Kennedy and Thirkeld 1988)
- * the effect of latent satisfaction or dissatisfaction
(Bloemer and Polesz 1989, Drew and Bolton 1991)

- * whether the difference between expectations and perceptions is a ratio or a difference (Swan and Combs 1976, Cooper et al 1989).
- * the relationship between arousal and pleasure and satisfaction (Wirtz and Bateson 1992)

4) The inclusion of perceived performance

One major criticism of the original model is that it did not include performance or perceived performance (of the product) as an influencer of disconfirmation. Several studies have been undertaken to look at the effect of performance, for example Swan and Combs (1976), Swan (1988), Tse and Wilton (1988), Oliver and DeSarbo (1988), Bolton and Drew (1991).

In a paper in 1982, Churchill and Surprenant reported their programme to understand the "full set of interrelationships among expectations, perceived performance, disconfirmation and satisfaction". Their results supported the now recognised disconfirmation theory stated above. Furthermore, they found that there was a difference between durable and non durable goods (a video disc player and a chrysanthemum!). Here the findings suggested that satisfaction with a video disc player could only be increased by improving its

performance not by minimising negative disconfirmation, demonstrating the importance of perceived performance in this case.

Swan (1988) developed Churchill and Surprenant's work and found that both product performance and disconfirmation were factors affecting satisfaction. He concluded, like Churchill and Surprenant, that for some goods performance may be the more important predictor and for others it is disconfirmation.

5) Cadotte et al's model

Oliver's original model was amended by Cadotte et al (1987) to include perceptions of experience. This is shown in figure 5.2.

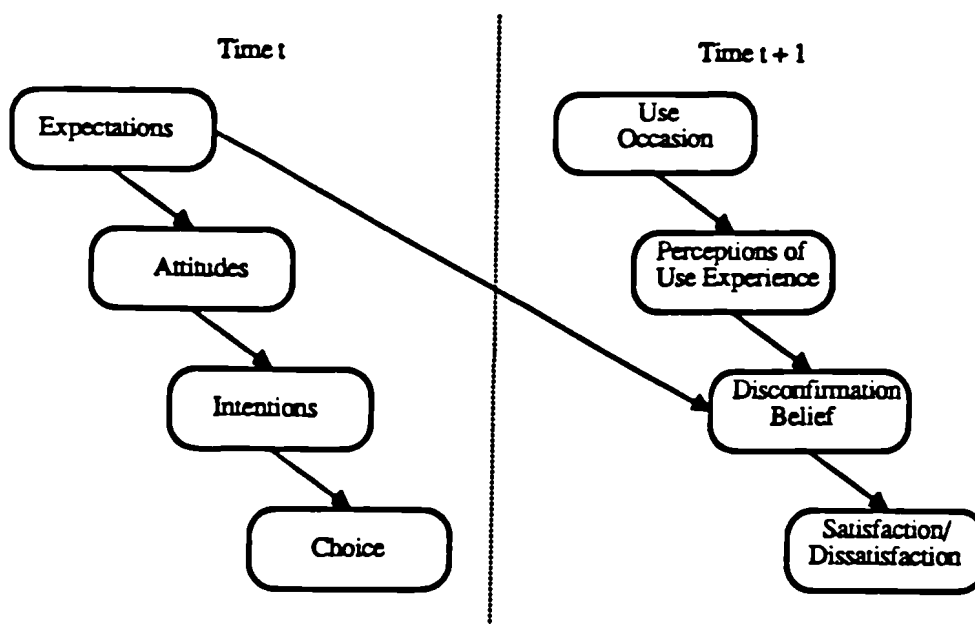


Figure 5.2 Cadotte et al's model of disconfirmation.

By 1992 perceived product performance had become a recognised factor in disconfirmation. "Perceived performance has (recently) been included in the disconfirmation of expectations model as the referent against which expectations are compared. However, many past researchers have not included performance as a direct antecedent of satisfaction" (Spreng and Olshavsky 1992).

6) Service applications

Most of the literature referred to so far investigates the disconfirmation theory as applied to products. Satisfaction, however, does not arise from the consumption of just products but may also arise from the consumption of services (Featherstone 1991). Several studies followed the early work, particularly in the late 1980s and early 1990s, applying the disconfirmation paradigm to service situations (see for example Day 1978, Bearden and Teel 1983, Cooper et al 1989, Jayanti and Jackson 1991, Bolton and Drew 1991, Sirdeshmukh et al 1992, Swan 1992).

One set of researchers, Jayanti and Jackson (1991), concluded that the disconfirmation model was inappropriate for services. They put forward a performance model rather than the disconfirmation model

suggesting that satisfaction judgements of services may be a function of performance alone as customers will have to base their judgements on tangible evidence only. Also a lack of pre-purchase information may result in customers having few, if any, expectations about the service. This view, however, does not seem to be supported by the service quality literature (see for example Parasuraman et al 1985) or the other consumer behaviour researchers who successfully applied the disconfirmation theory to services (see for example Swan 1992).

7) Disconfirmation is also a function of the activities of service providers

In 1992 Swan added another dimension to the disconfirmation model after applying it in a service situation (a hospital). He argued that satisfaction is a joint product of work between providers and customers (patients) and that satisfaction is a result of disconfirmation of expectations and performance standards. He emphasised the need of service providers in this setting to deal with customers' unrealistic expectations. He believed that the service worker is the neglected half of the equation. He stressed the need for the consumer and the service worker to act jointly to produce patient satisfaction.

Jayanti and Jackson (1991) found that the customers in their study (hairdressing) did not attribute failure to the service provider, but to themselves. This may be due to the particular nature of this service and an issue related to dissatisfaction rather than satisfaction. However, their work does suggest that there may be differences between the causes of satisfaction and dissatisfaction.

8) Expectations as a base for comparison?

Oliver (1980) stated that "Expectations are thought to create a frame of reference about which one makes a comparative judgement" however, there seems to be a lack of clarity about the performance standards, referred to by Oliver as "expectations", that consumers use in their evaluation of a product or service.

Cadotte et al (1987) claimed that very few researchers have examined the kinds of standards used by customers. Indeed the definitions of consumer behaviour at the start of this section implied other standards. Wilkie (1986) said the purpose of consumer behaviour is to satisfy customers' "needs and desires". Holbrook (1987) used the words "needs and wants". The operations literature too seems equally loose when defining quality. The definitions provided in chapter three use, seemingly arbitrarily, the words, needs, expectations and

requirements. Muhlemann et al (1992), for example, used all three in their definition of quality.

There is some work in the consumer literature that sheds some light(?) on this issue. Cadotte et al (1987) in their study concluded that customers do use standards other than expectations. Tse and Wilton (1986) stated that "researchers have not converged on the exact conceptualization of the comparison standard" which they call "a pre-experience comparison standard".

Several types of pre-experience comparison standards have been proposed in the literature, though their meaning is not always clear (Lilander and Strandvik 1993):-

Expected - Expectations are something that the customer *believes is likely* to be provided (Miller 1977, Oliver 1980). This, Tse and Wilton (1986) suggested is the most commonly used comparison standards in consumer satisfaction and dissatisfaction research.

Deserved - The deserved level of performance is that the customer *ought* to receive given the perceived costs (Miller 1977, Woodruff et al 1985).

Desirable - This is the standard that the customer *wants* to receive (Olshavsky and Spreng 1989, Spreng and Olshavsky 1992).

Ideal - Mattsson (1992a) proposed the use of an ideal standard as the best base which could serve as a bench mark against which experience is compared. He added that as the ideal standard can never be surpassed, only the negative direction of the disconfirmation is relevant in forming the emotional effect of satisfaction/dissatisfaction. He claimed that this standard "has not been used in quality research before", however, Miller used it in his classification of standards in 1977.

Minimum - These are the minimum tolerable standards, those that *must* be achieved (Miller 1977, LaTour and Peat 1979).

The question is although the pre-performance comparison standard might be anywhere on a scale from ideal to minimum tolerable, with desirable and deserved somewhere in between, what level do customers expect (see figure 5.3)?

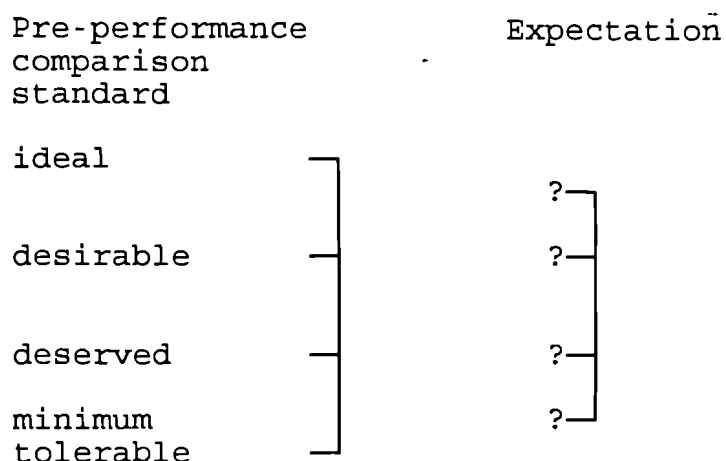


Figure 5.3 The difference between pre-performance comparison standards and expectations?

Cadotte et al 1987 suggested that the particular type of "expectation" or performance standard a customer uses is situation specific, though they did not differentiate between them. They stated that "expectations depend upon the purchase situation" and concluded that "we do not know enough about an individual's standards or what influences them". Woodruff et al (1985) supported this situation specific view, and like Cadotte, they did not try to provide the types of situations and the types of expectations that go with them. Oliver (1980) and Bearden and Teel (1983) recognised the potentially changeable nature of expectations and concluded that expectations are adaptable.

Tse and Wilton (1986) suggested that customers may use more than one base for comparison. They argued for multiple comparison standards. Cadotte et al (1987)

developed this view and suggested that there is a multidimensionality of standards which may be a weighted composition of other standards. They added that customers may imagine some abstract ideal performance but they also have concrete experiences with various real brands and their performance - so experience-based norms are more likely.

The disconfirmation theory, as a means of understanding satisfaction, has a great deal of support in the literature and has undergone some development since Cardozo's early work. The writers seem to be agreed that customers use some form of pre-experience performance standard on which to judge their perceptions of the performance of the goods or services leading to confirmation or disconfirmation.

Two questions arise from the review of the disconfirmation model:-

- 1) It is unclear what types of standards are used and their relationship with expectations. Are they situation or service specific or do they depend upon the needs or requirements of the individual?
- 2) An additional issue is that all of the models that have been referred to are concerned with single, individual transactions (see for example Foxall

1990), but the nature of service is such that it may comprise multiple encounters and activities. The literature does not seem to help in the development of satisfaction during a service process.

SATISFACTION

There seems to be acceptance in the literature that satisfaction and dissatisfaction is a response to disconfirmation, where disconfirmation is a function of a pre-experience standard and perceived performance. Its definition, its relationship with service quality, the levels of satisfaction, customers' greater sensitivity to negative disconfirmation and satisfaction as part of a process of disconfirmation are the subject of the following review.

Satisfaction defined?

The Concise Oxford Dictionary in its definition of satisfaction sheds no more light on the base for comparison "Satisfaction - satisfying or being satisfied in regard to desire or want or doubt, thing that satisfies desire or gratifies feeling".

The Latin root of satisfaction may well apply to the number of suggested constructs:-

An artificial construct - Featherstone (1991) "claimed that lifestyle is a manipulated product of the consumer society and that satisfaction, therefore, is artificially created.

A cognitive state - Oliver (1980) suggested that the view of satisfaction as a cognitive state was taken by some of the earlier literature. Swan (1988) commented that satisfaction is the result of a cognitive process of comparing perceived performance with expected performance.

An emotional response - Much of the consumer satisfaction and dissatisfaction literature refers to satisfaction as an emotional response to an evaluation of a product or service experience (see for example Hunt 1977, Oliver 1982, Day 1984). Mattsson (1991) specifically referred to it as "an emotional effect".

A complex mental process - Mattsson (1992a) also suggested that satisfaction is "a complex mental process by which a great number of components of the service encounter are simultaneously perceived".

An adaptive process - Johnston (1987) suggested that expectations can be moulded and adapted during the service process itself so that satisfaction evolves

from a dynamic process or interaction in a service setting.

An attitude - "satisfaction .. is conceptualised as a post purchase attitude ... and is operationalised as the sum of satisfactions with the different attributes of the product or service" (Jaranti and Jackson 1991).

An effect on attitudes - LaTour and Peat (1979) differentiated between attitudes and satisfaction. They claimed that an attitude is a predecision construct and satisfaction as a postdecision construct. Drew and Bolton (1991) explained this distinction more clearly "Satisfaction is an effect which acts as an intervening variable to modify a prior attitude into the current attitude". Hausknecht (1988) believed that satisfaction is "acting on an attitude system".

Bloemer and Polesz (1989) provide an overview of the issues of satisfaction in their paper to show that all is far from clear. They concluded that "there is a lot of conceptual and operational confusion" and suggested that satisfaction may be "an illusion". They did however, propose a new dimension - latent satisfaction and dissatisfaction.

While the consumer behaviourists and psychologists continue to pursue the quest for understanding the construct of satisfaction, this thesis is concerned with another issue. Its intention is to try to understand what causes a feeling of satisfaction or dissatisfaction during, and as a result of, a service process. For the purpose of this work, the consumer behaviour literature seems to be clear that it is some form of response as a result of the purchase of goods or services that will affect future purchase intentions. It is of limited importance whether satisfaction is a cognitive or artificial or emotional response. A more important issue is to understand whether service quality and satisfaction are the same or different constructs.

Satisfaction or service quality?

The previous chapter concluded that most service quality writers support the view that customer perceptions of service quality result in customer satisfaction or dissatisfaction (for example Grönroos 1984 and 1990 and Berry et al 1985). Cooper et al (1989) note that "there is an extreme similarity between the concepts of satisfaction and service quality. In fact the formation of the constructs of satisfaction and service quality are structurally quite similar".

It is somewhat surprising that little has been done to evaluate or consolidate these two similar approaches. Cronin and Taylor (1992) for example stated "to date the important relationships between service quality and customer satisfaction and purchasing behaviour remain largely unexplored".

Parasuraman et al (1988) stated "perceived quality ... is a form of attitude, related but not equivalent to satisfaction". They suggested that perceived service quality is "a global judgement, or attitude, relating to the superiority of the service, whereas satisfaction is related to a specific transaction".

Bolton and Drew (1991) attempted to draw together the consumer satisfaction and dissatisfaction (CS/D) and service quality constructs. They accepted that "Both CS/D and perceived service quality are postulated to be influenced by the gap between expectations and perceptions of performance". They cited some of the literature reviewed in the sections above and Parasuraman et al's view of service quality. "However" they added "the CS/D literature suggests a more elaborate model in which disconfirmation, expectations and actual performance levels affect customer satisfaction, which in turn becomes an input to customers' perceptions of service quality". Bolton and Drew (1991) proposed a multistage model (see figure 5.4) of service quality

where a "customer's disconfirmation experiences, expectations and perceived performance levels affect CS/D with a specific service transaction. In turn CS/D influences the customer's global evaluation of service quality." They see satisfaction to be transaction specific and service quality a more global attitude and that satisfaction is an antecedent of service quality.

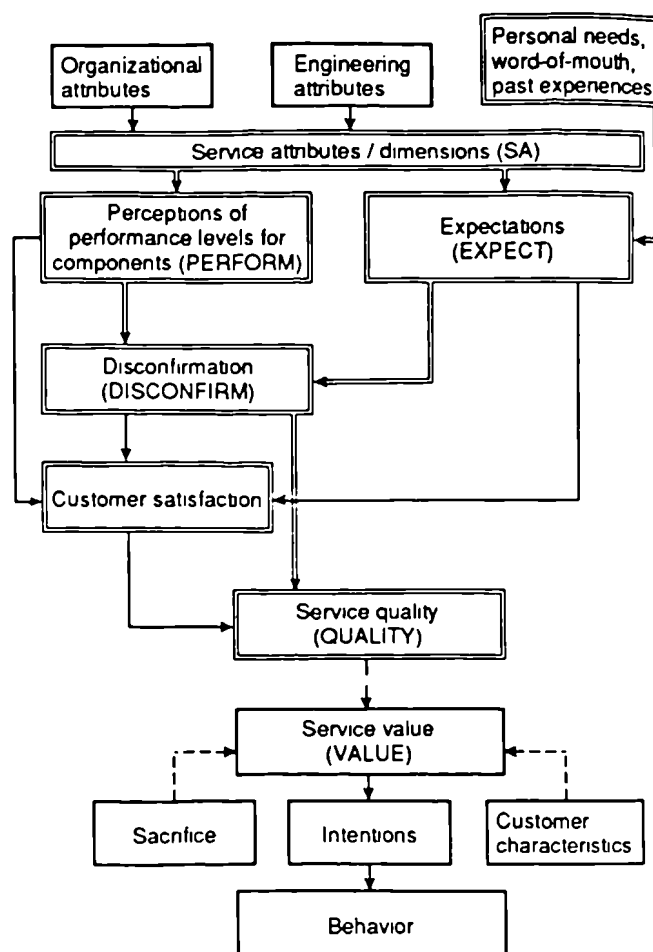


Figure 5.4 A multistage model of service quality

From their study into residential customers' perceived service quality, Bolton and Drew concluded that "a key

determinant of service quality is the gap between performance and expectations (ie disconfirmation)". They further added "A customer's assessment of overall service quality is also directly affected by perceptions of performance levels. This finding is consistent with CS/D literature, but is a new finding for the service quality literature". This last point, however, does not seem to be consistent with the service quality literature. Unlike the service quality literature, the CS/D literature only provides limited empirical precedent as to how specific expectations and disconfirmations should be accumulated into overall aggregate measures (Kennedy and Thirkell 1988).

Cooper et al (1989) supported this transaction versus global view and added "It is interesting to note that both satisfaction researchers and service quality researchers believe that satisfaction soon decays into an overall perception of service quality".

Cardozo (1965) (although referring to products) seems to imply that customer satisfaction and service quality are much more similar. He suggested that "Customer satisfaction, then, may be more a global concept than simply product evaluation. Satisfaction may involve evaluation of an entire product bundle or offering". Churchill and Surprenant (1982) also supported this view of satisfaction as a "global" construct. They stated

"Satisfaction can be assessed as the sum of satisfactions with the various attributes of products and services".

Cronin and Taylor (1992) disputed the notion that satisfaction is an antecedent of service quality. They provided empirical support for the notion that perceived service quality leads to satisfaction as proposed by Parasuraman et al (1985 and 1988).

Cooper et al (1989) suggested that it is just a matter of perspective; "customer satisfaction becomes an operations and personnel management issue when termed "service quality assurance". They also supported the view of disconfirmation as transaction specific whereas "expectations for service quality "are viewed as desires or wants of the customer". The discussions of the various pre-experience standards in the previous section seem to imply that desires or wants could be used as standards for disconfirmation too.

This was a view taken in the service quality literature by Parasuraman et al (1988). They contested that the service quality and consumer satisfaction literature used the word "expectations" differently. The satisfaction literature views expectations as predictions (that is what the organisation is likely to offer) and the service quality literature views expectations as desires or wants (that is what the service provider should offer). These

suggestions seem a little premature given the current inconclusive debate about the base of pre-experience comparison standards.

The debate on the difference between service quality and customer satisfaction is in its early stages. The emergent theme seems to be that the difference, if any, is between transaction specific and global attitude.

Levels of satisfaction

Churchill and Surprenant (1982) implied that satisfaction is a variable "Disconfirmation arises from discrepancies between prior expectations and actual performance. It is presumably the magnitude of the disconfirmation effect that generates satisfaction and dissatisfaction". They also pointed out that disconfirmation, which leads to a feeling of satisfaction or dissatisfaction, is also a function of two independent variables, what has been referred to as a pre-performance standard and perceived performance.

Mattsson (1991) suggested just two states "the axiom of goodness (level of satisfaction) can be expressed in a formal way, with positive or negative value, and for each evaluation there can be a positive or negative outcome".

Johnston and Lyth (1991) agreed that customer satisfaction was a variable but further suggested that there were three outcome states on a variable scale (this supports the disconfirmation theory). The three states are negative resulting from poor perceived quality (negative disconfirmation), positive from high quality (positive disconfirmation) and zero from adequate quality (confirmation).

This zero, confirmation, state has also been termed the "zone of indifference" (Miller 1977, Oliver 1980, Woodruff et al 1985, Swan 1988, Kennedy and Thirkell 1988). Cadotte et al (1987) explained "Confirmation occurs when performance matches the standard, leading to a neutral feeling".

Woodruff et al (1985) postulated that the zone of indifference is a mediator between confirmation and disconfirmation. They suggested the reason for the existence of this zone as being that the "perceptual limitations of people can cause some imprecision when the confirmation/disconfirmation cognition is made". Figure 5.5 shows their view of the relationship between performance and disconfirmation.

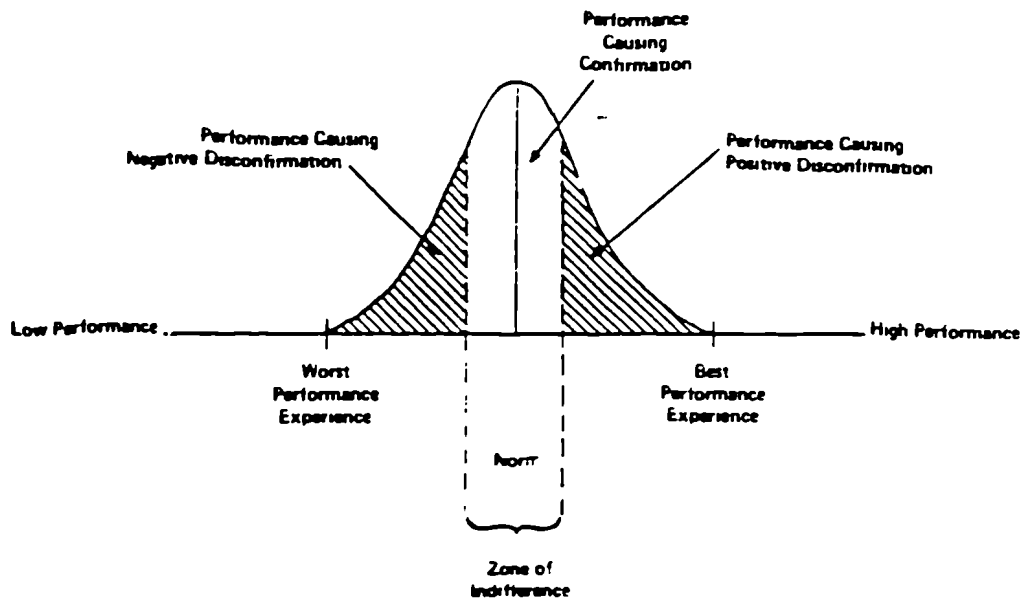


Figure 5.5 Woodruff et al's relationship between performance and disconfirmation

Woodruff et al further suggested that indifferent performance is probably a common occurrence and that only perceived experience outside this area elicits positive or negative feelings about the experience. They postulated that the width of the zone varies inversely with the breadth and depth of a customer's experience with the brand. A similar suggestion was made by Olshavsky and Miller (1972). They claimed that perceptions, when they are close to the norm, are within a latitude of acceptable performance. It is only when the distance from the norm is great enough that performance is perceived as different from the norm. The difference causes disconfirmation (positive or negative).

Kennedy and Thirkell (1988) referred to customer tolerance. They suggested that if expectations were not

met dissatisfaction did not necessarily occur as they postulated that customers had a level of tolerance and it was only when this was exceeded that dissatisfaction occurred. This is summarised in their diagram, figure 5.6 below.

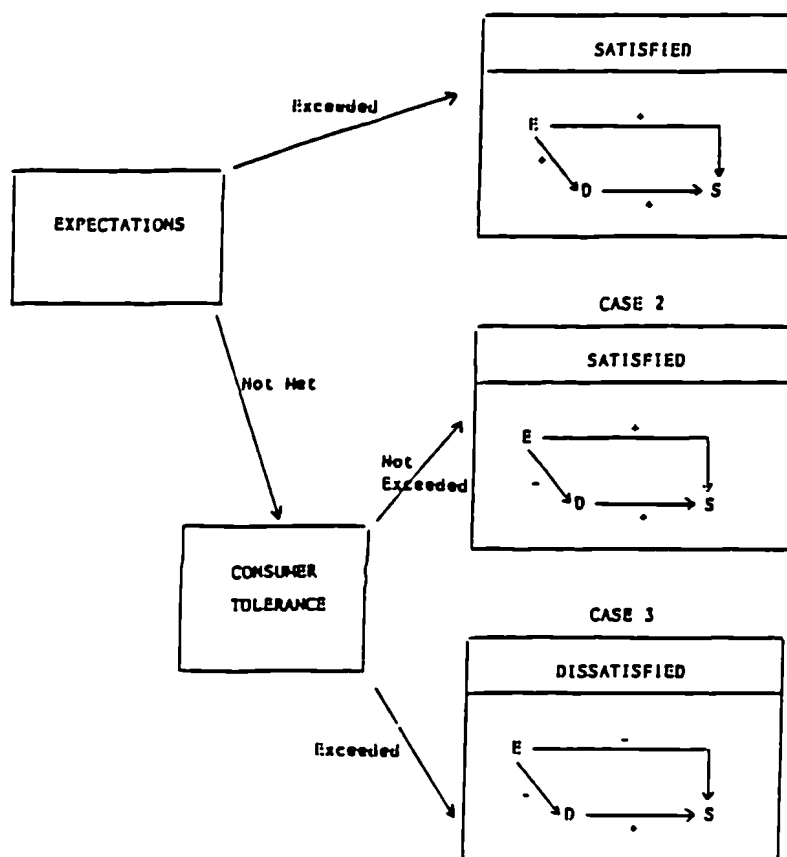


Figure 5.6 The construct of tolerance

A key difference in their argument between tolerance and indifference is that if tolerance is not exceeded satisfaction results, whereas the zone of indifference would suggest a zero or satisfied state. The service quality literature would suggest that to move from unmet

expectations to satisfaction some form of recovery would need to take place.

Berry and Parasuraman (1991) suggested the zone of tolerance mediates between customers *desired* level of service and an *adequate* level of service, see figure 5.7. This however, seems to be at odds with much of the rest of the literature which implies that adequate service would lie within the zone of tolerance as indeed could desired service. Interestingly, in their 1985 paper, Berry et al put satisfaction on a scale that ranges from unacceptable to ideal quality.

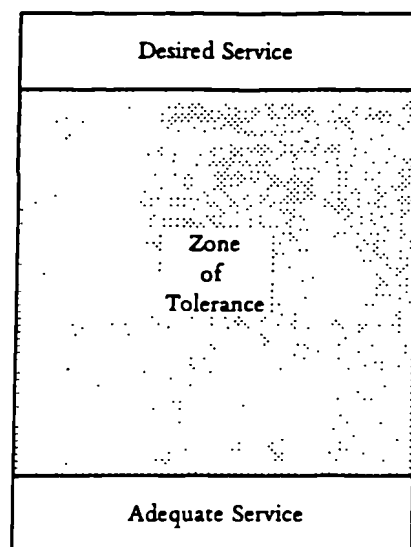


Figure 5.7 The zone of tolerance

A recent study into the types of pre-experience standards to try to understand the zone of tolerance by Liljander and Strandvik (1993) suggested that expectations should be seen as zones, rather than discrete points on a scale. Using conjoint analysis on four variables in satisfaction

creation, in a pilot study in a restaurant, they concluded that the zone of tolerance can be interpreted as a kind of inertia regarding behavioural responses to disconfirmation of expectations.

The concept of involvement may help understand more about the zone of tolerance. Involvement, a term first popularised by Krugman (1965), concerns a customer's perceived importance of a purchase situation (Engel et al 1993). If a customer perceives a purchase to be important, because it is of interest to him or her or because there is some degree of perceived risk associated with the purchase or its implications or there is a particular emotional involvement with the products or service for example, the more effort will be put into the purchase decision (see for example Foxall 1990, Assael 1992). The greater effort will involve a greater search for information, and a greater perceived difference between the available products or services, and a greater awareness about the product or service and its consumption (Engel et al 1993).

The link with satisfaction and dissatisfaction, though not spelt out in the consumer behaviour literature, is that the higher degree of involvement the greater the customer's sensitivity is to satisfaction and dissatisfaction. A customer making a service purchase with little involvement could have a very wide zone of

tolerance. One with great involvement could have a narrow band of tolerance.

This would seem to support the view that the zone of tolerance is a function of the customer's needs and requirements of the service, which will be more keenly felt in some situations.

Another interesting point about moving from the zone of tolerance to a positive or negative state was made by Brandt and Reffett (1989). They suggested that customers are more likely to notice bad service than good service. They suggested that "good" service may go unacknowledged and unnoticed by customers because "good" service is the expected outcome of a service delivery system.

Customers, however, do notice, and may be dissatisfied by, poor service as it is not usually expected nor wanted. They suggest that it is when poor service occurs that customers become aware of service quality. "It is only when they experience problems that customers give service quality any attention at all." While the converse may also be true, there is some support for the suggestion that the negative gap may be more recognisable than a positive gap (see for example Levitt 1981, Haywood-Farmer and Nolle 1991).

There are three important themes that emerge from the literature concerning the levels of satisfaction:-

- 1) There seems to be a consensus that satisfaction is a variable comprising three zonal states, satisfaction, neutral and dissatisfaction.
- 2) The width of the neutral zone, or zone of tolerance, is a function of the customer's pre-performance standards and their level of involvement.
- 3) It seems to be implied that customers then have thresholds and that there are events that may occur during the purchase process, or service, that will cause a customer to "switch" from one zone to another.
- 4) The zone of tolerance appears to be an "unnoticed" state, and it is only when those switches occur that satisfaction or dissatisfaction is noticed.

A number of questions arise which do not seem to be adequately answered by the literature:-

- 1) Is dissatisfaction a higher conscious state than satisfaction which is in turn a higher conscious state than neutrality?

- 2) What are the thresholds between the zones and how do customers internalise or understand these thresholds?
- 3) What are the "switches" that move a customer from one state to another?

Satisfaction - the result of a process

Much of the consumer behaviour experiments contained in the literature were concerned with single transactions. Johnston (1987), in the service management literature, suggested that customer's perception of quality depended upon the series of transactions throughout the customer process. Swan and Combs (1976), in the CS/D literature, made a similar point. They demonstrated that if expectations are satisfied in one area of performance and not satisfied in one area they may lead to a result of dissatisfaction overall. Tse and Wilton (1986) argued that the disconfirmation process is complex, it involves "complex, simultaneous interactions that may involve more than one comparison standard - a process of multiple comparisons (which might occur either simultaneously or sequentially) is likely to have reasonable empirical support".

This view of satisfaction as the result of a developmental process is also supported by Oliver and

DeSarbo (1988). It does, however, call into question again the difference between customer satisfaction and service quality. It implies that satisfaction is the result of several transactions within a service process leading to an overall feeling of satisfaction or dissatisfaction.

Swan 1992 too recognised this process although he claimed that the literature "has not provided much in the way of detail on the processes involved in the production and consumption of services". "Satisfaction" he added "is a social process" a function of customers and providers over a period of time when negotiations about expectations can take place. This process view is also supported by Erevelles and Leavitt (1992) "consumer satisfaction/dissatisfaction may include multiple processes and standards of comparison".

The different causes of satisfaction and dissatisfaction?

There has been some recent research which has sought to identify some of the factors that might cause customers to switch from a neutral to a satisfied or dissatisfied state.

Swan and Combs (1976) postulated that "consumers judge products on a limited set of attributes, some of which

are relatively important in determining satisfaction, while others are not critical to consumer satisfaction but are related to dissatisfaction when performance on them is unsatisfactory". Their hypothesis was that there are two types of factors, instrumental (the performance of the physical product) and expressive (the psychological performance of the product) and that both have to be achieved to satisfy the consumer. They postulated that satisfaction will tend to be associated with expressive outcomes above or equal to expectations and dissatisfaction will tend to be related to performance below expectations for instrumental outcomes. Also to be satisfactory, the product must meet expectations on both instrumental and expressive outcomes. They suggested that dissatisfaction may occur from either type of performance. To test their ideas they applied a modified version of the critical incident technique (see chapter seven) and asked 60 graduate students to "think about an item of clothing that has been especially satisfactory and an item that has been especially dissatisfactory". The students were interviewed about their reasons.

Swan and Combs stated that this was very much an exploratory study and that its findings were not necessarily generalisable. They found some problems in the classification of their data, for example, comfort could be instrumental or expressive and its

categorisation as one or the other significantly affected the results. They also found that both instrumental and expressive factors led to both satisfaction and dissatisfaction. It should also be noted that their work was concerned with products and not services.

Maddox (1981) replicated Swan and Combs study in his PhD thesis. His 1981 paper reported data collected about clothing, personal care products, durables and small appliances. (He included an additional product, bread, in his PhD but this did not appear in his 1981 paper, no explanation was given for its exclusion.) He gave a self administered questionnaire to about 200 members of a consumer behaviour class at the University of Missouri-St Louis in 1979. The response rate was over 80 per cent. He used the same classification and hypotheses as Swan and Combs.

The outcome of his study provides support for Swan and Combs' findings that they found it difficult to make predictions on the link between the two outcomes and customer satisfaction. He did find however that "low values on an expressive attribute will reduce satisfaction, but will not lead to dissatisfaction".

Another preliminary investigation was carried out by Hausknecht (1988). He again applied the critical incident technique to a group of 94 students

investigating their experience of a number of products. He concluded that satisfaction is best characterised by the emotions interest, joy, surprise and dissatisfaction by anger, disgust and surprise. His study revealed differences in the emotions of satisfaction and dissatisfaction, rather than the causes of these states.

Cadotte and Turgeon (1988) undertook an analysis of the content of complaints and compliments reported by a cross section of restaurant owners in the USA. There were 432 responses from restaurants and 260 from hotels most of which, surprisingly, were compliments and not complaints (only nine per cent of the guests' comments that they were sent were unfavourable). They found that some variables were *dissatisfiers* when the performance or absence of the desired feature led to dissatisfaction which then resulted in complaining behaviour. Furthermore, higher levels of them did not appear to cause compliments, for example parking at the restaurant. They concluded that "Dissatisfiers represent the necessary but not sufficient conditions of product performance". There were also some *satisfiers* where unusual performance elicited strong feelings of satisfaction leading to complimenting behaviour, but typical performance or absence of performance did not necessarily cause negative feelings. They stated "from a management point of view satisfiers represent an opportunity to move a head of the pack".

They further suggested that there were "criticals" which were the variables that could elicit both positive and negative feelings - quality of service was one of the factors that ranked high as both a satisfier and dissatisfier. They also identified "neutrals" as those areas which received neither compliment nor complaint.

This work seems to suggest that the causes of satisfaction and dissatisfaction may be different. However, the study was of only one industry. An additional point was that only the very extremes of satisfaction and dissatisfaction were analysed. It is possible that complaints and complements represent only the extremes of satisfaction and dissatisfaction rather than the whole of those zones.

Furthermore, and importantly, service quality was a single variable yet other variables included service quality characteristics, for example cleanliness, speed of service, employee knowledge. It was unclear what remained in the quality of service category.

There have also been a number of studies undertaken in this area by service marketers and service operations management researchers.

A study by Bitner et al (1990), again using the critical incident technique, attempted to identify the events and employee traits that led to satisfactory and dissatisfactory outcomes. They studied 700 incidents from customers of airlines, hotels and restaurants. They identified employees' willingness to respond to a problem, employees' responsiveness to customer needs and requests and unsolicited employee actions as being the key employee actions that cause both satisfaction and dissatisfaction. Their study focused on the actions of employees and so had only limited coverage of service quality.

In 1992 Mersha and Adlakha asked 25 MBA students to identify the factors that satisfied and dissatisfied them. The twelve resulting attributes were found to be similar to those proposed by Parasuraman et al (1985). This led to the development of a questionnaire which was pre-tested on an undergraduate class and tested on a graduate class. Five services were covered, physician, retail banking, car maintenance, colleges and fast food restaurants. The attributes of good quality were knowledge of the service, thoroughness, accuracy, consistency, reliability, reasonable cost, willingness to correct errors, timely and prompt service. The attributes of poor quality included lack of knowledge about the service, employees' indifference, reluctance to correct errors, service inconsistency, sloppiness and

high cost. There seems to be some evidence that, at a detailed level, there may be some difference between the causes of satisfaction and dissatisfaction.

A further study was undertaken by Smith et al also in 1992 using the critical incident technique and cluster analysis. They suggested that the factors that determine satisfaction and dissatisfaction indeed may be different. They did not use the existing service quality characteristics but found that satisfaction was usually generated by service going beyond expectations and dissatisfaction resulted from failure, slowness, disinterest and rude staff. Their data came from a single industry, retail services, and their sample comprised graduate and undergraduate students from an American university. Their database comprised 35 satisfied incidents and 36 dissatisfied incidents.

Also in 1992, Edvardsson reported the results of the use of the critical incident technique into the causes of negative critical incidents in an airline. He took information from both passengers and staff to identify the cause, course and result of the incidents. His results were interesting and he reported a difference in the perception of incidents between customers and staff. He suggested that collecting information from front line staff will not necessarily help in understanding customers' perceptions of quality failures.

What emerges from these studies is a view that there may well be a difference between the causes of satisfaction and dissatisfaction and also, from Edvardsson (1992), that it is important to gain that information directly from customers.

All of the studies were acknowledged to have some weaknesses:-

- 1) The early studies were product based and therefore did not assess service quality (Swan and Combs 1976, Maddox 1981 Hausknecht 1988).
- 2) Some studies used broad categories of service quality (Swan and Combs 1976 and Cadotte and Turgeon 1988, Bitner et al 1990).
- 3) Some studies used small samples (for example Mersha and Adlakha's (1992) sample was 25 and Smith et al's (1992) was 36).
- 4) Some of the studies were exploratory in nature using students whose experiences and expectations may not necessarily reflect those of the population (Swan and Combs 1976, Maddox 1981 Hausknecht 1988, Mersha and Adlakha 1992, Smith et al 1992).

- 5) Edvardsson (1992) chose only to look at negative factors.
- 6) In all cases there was little underpinning of the work by the consumer behaviour literature and in particular the disconfirmation theory.
- 7) In only Bitner and Boom's and Edvardsson's studies did the researchers make any attempt to consider the impact of recovery on the satisfaction and dissatisfaction outcome.

CONCLUSION

It appears that much of the consumer behaviour literature is very narrow in focus. The researchers seem to have taken the concept of disconfirmation and investigated it in great detail and concluded that they do not know much about it and also have little idea as to how what they don't know can be applied. A similar point was made by Jacoby (1978), a consumer researcher. He stated that "it is clear that almost every aspect of consumer research reflects the atheoretic shotgun approach, particularly when it comes to utilizing concepts borrowed from the behavioural sciences. Most consumer researchers are still pulling shotgun triggers in the dark".

Despite this shotgun approach the consumer behaviour literature has provided some theoretical underpinning of customer satisfaction based predominantly on marketing and psychology. It has also developed the satisfaction/dissatisfaction construct through the development of concepts and models over the last two decades using empirical studies. Although debate continues on many issues there seems to be general agreement on several points:-

- 1) Understanding and creating customer satisfaction is important as it is widely accepted in the literature that customer satisfaction is a significant determinant of repeat purchases, brand loyalty, acceptance of other products in the same product line, and favourable word-of-mouth publicity (see for example Cardozo 1965, Churchill and Surprenant 1982, Bearden and Teel 1983, LaBarbera and Mazursky 1983).
- 2) The creation of consumer satisfaction is an important issue for operations managers, marketers, human resource managers, strategists and financial managers (Wilkie 1986). Operations has a key role to play in managing perceived performance, controlling quality and managing service providers. The key role of marketing is the formation of

appropriate pre-experience comparison standards
(Swan 1988 and 1992).

- 3) Several satisfaction/dissatisfaction models exist but the most widely used and accepted paradigm is the disconfirmation theory (see for example Woodruff et al 1985, Swan 1988, Tse and Wilton 1988, Oliver and DeSarbo 1988, Cooper et al 1989, Vezina and Nicosia 1990, Bolton and Drew 1991, Mattsson, 1991). This has undergone some development and testing since the 1960s.
- 4) The disconfirmation theory has been extensively applied to products and only more recently to services (see for example Bearden and Teel 1983, Cooper et al 1989, Jayanti and Jackson 1991, Bolton and Drew 1991, Sirdeshmukh et al 1992, Swan 1992).
- 5) There has been some debate about the use of expectations as the base for comparisons with perceptions of performance. Several pre-performance standards have been proposed from ideal (Mattsson 1991) to minimum tolerable (LaTour and Peat 1979).
- 6) There is agreement that service quality and satisfaction are similar constructs, but the differences are still being debated (see for example

Cooper et al 1989, Bolton and Drew 1991, Cronin and Taylor 1992).

- 7) Three levels of satisfaction have been identified which correspond to the disconfirmation theory; positive, negative and a zone of indifference (see for example Woodruff et al 1985, Cadotte et al 1987, Swan 1988, Johnston and Lyth 1991).
- 8) Indifferent performance is probably a common occurrence and that only perceived experience outside this area elicits positive or negative feelings about the experience (Woodruff et al 1985, Brandt and Reffett 1989). The width of the zone of indifference depends upon the customer's experience (see for example Olshavsky and Miller 1972, Woodruff et al 1985) and their level of involvement in the purchase (see for example Krugman 1965, Foxall 1990, Assael 1992, Engel et al 1993). There is also a view that a negative gap may be more recognisable than a positive gap (see for example Levitt 1981, Haywood-Farmer and Nollet 1991).
- 9) Satisfaction is the result of single transactions, though where a series of activities is concerned, the development of an overall feeling of satisfaction (or service quality) is seen to be a process (see for example Swan and Combs 1976, Tse

and Wilton 1986, Oliver and DeSarbo 1988, Swan 1992, Erevelles and Leavitt 1992).

- 10) There seems to be some limited evidence that the causes of satisfaction may be different to those that cause satisfaction (see for example Swan and Combs 1976, Maddox 1981, Hausknecht 1988, Cadotte and Turgeon 1988, Bitner et al 1990, Mersha and Adlakha 1992, Smith et al 1992 and Edvardsson 1992).

Several questions emerge from the literature review which are largely unresolved:-

- 1) What do customers use as pre-experience comparison standards? Are they situation specific? Do customers use several bases for comparison, for example they may want the ideal, need the minimum tolerable, but expect something in between?
- 2) What is satisfaction? Is it an attitude or an effect on attitudes? Is it an emotional response or a cognitive response?
- 3) Is service quality the same as satisfaction? Is satisfaction a response to a single transaction and service quality a more "global" attitude? Does satisfaction decay into service quality?

- 4) What is the link between tolerance and satisfaction? What are the "switches" that change a zero adequacy state into a positive or negative one? Teboul (1991) posed the question, how do we transform "minuses" into "pluses"?
- 5) Are the switches that move a customer from a zero to a positive state different from those that move him or her to a negative state? Cadotte and Turgeon (1988) for example, stated "The data suggests that some attributes could be salient in their potential to cause dissatisfaction while other attributes could be salient in their potential to cause high levels of satisfaction". What are the different switches?
- 6) Myers and Alpert (1968) argued that only a limited set of attributes play a critical role in choosing between alternatives. Which are the critical ones in creating a feeling of satisfaction or dissatisfaction?
- 7) The service recovery ideas are not included in the consumer satisfaction literature. It is assumed that negative disconfirmation leads to dissatisfaction. Is this always the case?

- 8) Is there a link between pre-experience comparison standard and the outcome? If consumers are using an ideal standard is the outcome more likely to be dissatisfaction than if they are using a minimum tolerable standard? Is the outcome inversely proportional to the level of standard?

Chapter 6

DEVELOPMENT OF HYPOTHESES

SUMMARY

The objectives of this chapter are to draw together some of the key issues from the three literature reviews and to develop a satisfaction model in order to provide a base for the third and main objective, the development of the hypotheses for testing in the empirical part of this research.

There is a clear emergent need to further the integration of service issues into the operations management literature. In particular there is a need to develop tools and techniques to help service managers create satisfied customers and minimise dissatisfaction.

The three literatures provide some conceptual underpinning for this. In particular, the importance of the operation as a process, the outcomes of the service process, service quality characteristics, service recovery, the nature of satisfaction and the disconfirmation model.

A model is proposed in this chapter that integrates the three literatures. It combines the transaction perspective, the process approach and the total or global perspective into a synthesized and dynamic satisfaction model.

This model highlights several questions. The key one for this research is what are the critical characteristics that lead to satisfaction and those that lead to dissatisfaction? Three hypotheses are developed that differentiate between satisfying, dissatisfying, hygiene, enhancing and recovery factors.

INTRODUCTION

The objectives of this chapter are firstly to draw together some of the key issues from the three literature reviews. The second objective is to develop a satisfaction model to provide a base for the third and main objective, the development of the hypotheses for testing in the empirical part of this research.

The first section of the chapter draws together the pertinent conclusions from the literature.

A synthesized model of satisfaction that integrates the three literatures to provide a conceptual framework for the development of the hypotheses is developed in section two.

Section three discusses and proposes three hypotheses.

CONCLUSIONS FROM LITERATURE

The last three chapters have traced the development of ideas on quality, service quality and satisfaction. The key question to ask of the literature reviews contained in the previous chapters is how have they helped us understand the nature and causes of customer satisfaction and dissatisfaction during, and as a result of, a service operation.

Operations management

This section summarises the nature of the subject and its recent developments and describes two emergent imperatives for change, a strategic and a service imperative. It then considers the specific area of quality management in terms of these two imperatives.

The development of the subject

From the historical review of the subject, operations management emerges as a recognised set of tools and techniques concerned with the internal efficiency of the operation (see for example Johnson et al 1972, Buffa 1976, Schroeder 1989). It is a subject founded upon scientific management and operations research.

The subject, however, has witnessed a number of recent developments. The 1950s saw the emergence of a more holistic approach, systems thinking, which was concerned about the subject's links with other parts of the business. This was in contrast to the operations research approach (see for example von Bertalanffy 1956 and 1962, Ackoff 1960, Forrester 1961, Hall 1962, Johnson, Kast and Rosenzweig 1963, Churchman 1968). The 1970s and 1980s saw the application of computer power to operations problems (see for example Chase and Aquilano 1989). The 1980s have seen the acceptance and

implementation of the "new" management philosophies of Just-in-Time and Total Quality Management, again taking a wider perspective of operations. These are now the cornerstones of production practices in many manufacturing firms.

The future changes that may be seen are likely to be driven by the continuing interest, and need, for integration with the rest of the business, the strategic imperative, and by the growing interest in one sector of operations, the service imperative.

The strategic imperative

The role of operations as being solely concerned with the internal efficiency of the operation has been challenged in the last few years by a more strategic and integrated vision of operations. This view is more concerned about the whole organisation, in particular the effectiveness of operations alongside the other functions.

The strategic-oriented challenge has specifically been taken up in the development of "manufacturing strategy". This area of the subject has been concerned with demonstrating that while operations has a key role in the implementation of corporate strategy, there is a need for operations to be involved in its formulation in order to provide the organisation with a competitive advantage

(see for example Hayes and Wheelwright 1984, Hill 1985, Skinner 1985 and Slack 1991).

The subject has been more concerned not only about its integration with corporate strategy but also its relationship with other functions and disciplines. Indeed, the subject has had recent liaisons with finance (for example Fitzgerald et al 1991, Bateson 1985, Brown et al, 1991, Bowen 1985, Mills and Morris 1992).

The future for OM seems to be a move toward becoming a more outward facing subject that works closely with other functions and disciplines to achieve a greater strategic input into the management of the organisation.

The service imperative

A second and not unrelated dimension of the subject which has been the focus of recent debate is the development of service operations. The interest in service activities is relatively new, despite the existence of service operations for at least as long as production activities. One reason for this imperative is in part the strategic imperative. There has been some recognition that service, how the goods are delivered to the customer and how the customer is treated, provides many manufacturing organisations with a competitive edge (see for example Chase and Erikson 1988, Hart 1988, Albrecht and Bradford

1990, Quinn, Dorley and Paquette 1990, Chase 1991, Martin and Horne 1992).

A more compelling reason is the recent recognition of the economic importance of the service economy (Haynes and DuVall, 1992). Service activities in most western economies account for nearly 70 percent of GDP and employment, comprise the fastest growing sector and are a major supporter of the balance of payments.

There has, however, been some integration of service issues into the operations management literature. First, there has been some limited incorporation of service issues into some of the more recent editions of operations texts (see for example Schroeder 1989 and Meredith 1992). Second, there has been the creation of specialist service operations texts (see for example Sasser, Olsen and Wyckoff 1978, Fitzsimmons and Sullivan 1982, Voss et al 1985, Collier 1987, Harris 1989, Murdick et al 1990). This latter move may have been a back-lash against the general limited treatment of service issues by the main stream operations texts which seem firmly rooted to their industrial engineering, production-based past.

Maybe partly as a result of this lack of progress, the service imperative has been taken over by, in particular, the marketers. They have been at the fore in the development of the new subject of service management. A

number of texts have recently been written trying to take a cross disciplinary, more strategic view, of service incorporating marketing, operations and human resource issues (see for example Normann 1984, Heskett 1986, Lovelock 1988, Bowen et al 1990, Grönroos 1990b, Heskett, Sasser and Hart 1990, and Haywood-Farmer and Nollet 1991).

It appears that modern operations management has been struggling to come to terms with the "service revolution". The difficulties the mainstream operations function seems to be having in integrating service issues suggests that it is still very much an inward, efficiency-oriented manufacturing subject which does not seem to be able to cope with the more externally oriented, customer facing view of service. However, given the recognition of the importance of service as a competitive weapon and as a main part of the economy, the drive to develop service operations material will no doubt continue.

Quality management

Quality management is one particular area where these two imperatives can be seen to be at work, though with varying degrees of success.

Despite general agreement that quality is an important, and sometimes the most important, competitive factor (see

for example Feigenbaum 1986, Oakland 1989, Buzzel and Gale 1987) the operations management literature focuses on its role as primarily being concerned with the application of operations research and quantitative techniques. These techniques, which include acceptance sampling, sampling risks, and statistical process control (see for example Johnson et al 1972, Chase and Aquilano 1973, Wild 1980, Hill 1983, Chase and Aquilano 1989, Evans et al 1990), are primarily concerned with the control of product characteristics to enhance the internal efficiency of the organisation rather than the support and development of a competitive advantage. This approach is not too surprising given the quantitative nature and background of operations management.

The strategic developments

Some recent texts do include a more strategic view of quality by explicitly recognising the interfunctionality of this task particularly through the inclusion of discussion of Total Quality Management. As a result some texts have shifted their emphasis somewhat toward the support and development of a competitive advantage (see for example Schroeder 1989, Krajewski and Ritzman 1990, Muhlemann et al 1992, Meredith 1992). These texts include material not only on the traditional quality control techniques, but also on wider improvement activities, for example continuous improvement techniques, prevention of defects, quality programmes,

Japanese approaches, total quality management, quality award schemes, and quality functional deployment.

The service developments

Most texts are predominantly product oriented in their treatment of quality. They use product oriented definitions and characteristics with little reference to the quality of services (see for example Garvin 1984, Schonberger 1985, Juran et al 1988, Krajewski and Ritzman 1990, Hill 1991, Muhlemann et al 1992). This is despite a recognition in all of the texts of the importance of both goods and service quality. Whilst the subject of quality seems to have responded to the strategic imperative, there is only limited evidence of it having responded to the service imperative. In particular there seem to be five main gaps in the literature:-

- 1) There is a lack of a set of generic empirically-based product characteristics which can be used as a base for linking the user-based and manufacturing-based views of quality (see for example Oakland 1989, Krajewski and Ritzman 1990, Hill 1991).
- 2) There seems to have been little application of the tried and tested statistical quality control techniques to service quality characteristics (for example Schonberger 1985, Schroeder 1989, Hill 1991). Yet it is these techniques which underpin

not only the traditional, but also the more recent, approaches to quality.

- 3) While TQM has attempted to take a strategic focus and tried to integrate the various parts of the business through quality chains for example (see for example Oakland 1989, Slack 1991), there has only been a limited integration of the user- and manufacturing-based views of quality (see for example Garvin 1984 and Wyckoff 1984).
- 4) The operations management literature is predominantly product oriented. There is a significant gap in the operations literature about how to define, measure and control the quality of services.

Conclusion

What emerges from the literature is a view of operations management as primarily an inward looking function concerned with the efficiency of the operation (Johnson et al 1972, Buffa 1976, Schroeder 1989) whose base is in goods manufacturing supported by a set of primarily product orientated tools and techniques.

There seem to be two emergent imperatives, a strategic and a service imperative. The subject appears to be trying to respond to these imperatives by:-

- * taking a more strategic view of operations, particularly through manufacturing strategy (see for example Hayes and Wheelwright 1984, Skinner 1985)
- * developing a more strategic role particularly through the development and support of competitive advantage (see for example Hill 1985, Slack 1991)
- * moving from internal efficiency oriented focus of quality to a more strategic TQM approach (see for example Schroeder 1989, Krajewski and Ritzman 1990, Muhlemann et al 1992, Meredith 1992).
- * recognising the importance of services to goods producers (see for example Chase and Erikson 1988, Hart 1988, Albrecht and Bradford 1990, Quinn, Dorley and Paquette 1990, Chase 1991, Martin and Horne 1992).
- * recognising the need to integrate service into operations management (see for example Schroeder 1989 and Meredith 1992).
- * the development of a greater service orientation by some mainstream operations texts and the appearance of some specialist service operations texts (see for example Sasser, Olsen and Wyckoff 1978, Fitzsimmons

and Sullivan 1982, Voss et al 1985, Collier 1987, Harris 1989, Murdick et al 1990).

Despite these activities there seem to be a number of gaps in the operations-based quality literature. There seems to be a need to:-

- 1) provide a more service orientated operations management literature
- 2) integrate better the operations literature with that of other functions and disciplines which are working in complementary areas
- 3) understand better the nature of customer satisfaction/service quality
- 4) understand better the nature of the process that develops satisfaction (or dissatisfaction) in the minds of the customers
- 5) develop tools and techniques to help operations managers measure, control and improve service quality
- 6) identify the characteristics that operations managers should measure and control in order to ensure customer satisfaction

- 7) identify the critical characteristics that lead to satisfaction and those that lead to dissatisfaction.

There is now an opportunity to capitalise on the current trends in operations management, the strategic and service imperatives, to develop the service aspects of operations management particularly through a willingness to understand and share in the activities of other functions and disciplines.

Service management

The new cross-disciplinary subject of service management has made some significant contributions to the service quality debate. There has been a significant amount of research undertaken, albeit relatively recently, in this area, primarily by marketing-oriented researchers (see for example Berry et al 1988, Brown and Swartz 1989, Grönroos 1990, Mattsson 1992).

The service management literature is predominantly concerned with service quality as seen from the customers' (users') point of view; the customers' perceptions of quality (see for example Gummesson 1987, Grönroos 1990, Haywood-Farmer and Nollet 1991). In particular it has defined customer satisfaction as being the result of the customer comparing expectations to the experience of the service process and its outcomes (Grönroos 1984, Parasuraman et al 1985).

There has been some debate about the similarity between customer satisfaction and service quality (see for example Zeithaml et al 1990, Lindquist and Persson 1992). It seems to be broadly accepted that the end result is a feeling of satisfaction or dissatisfaction in the customer's mind, but there is a suggestion that service quality is the organisation's view of quality or a generalised feeling as a result of satisfaction/dissatisfaction with several transactions (see for example Jones 1989, Davidow and Uttal 1989, Mattsson 1992a).

The service quality literature has provided an empirically based set, or rather sets, of service quality characteristics concerned with both the tangible and intangible aspects of a customer's experience (for example Parasuraman et al 1985, Johnston and Silvestro 1990). Researchers have used these to develop practical service quality control models and mechanisms (see for example Zeithaml et al 1990, Armistead 1990, Fitzgerald et al 1991).

A number of service quality measurement instruments and concepts have also been developed, in particular SERVQUAL (see for example Parasuraman et al 1991), service quality maps (Collier 1988) and input, process, output control measures and mechanisms (Fitzgerald et al 1991).

Another important outcome has been the work on service recovery. This literature contends that if a service operation fails in some way or other, dissatisfaction need not necessarily result. The operation has an opportunity to recover the customer and to turn a negative experience into a satisfying one (for example Berry et al 1985, Hart et al 1990).

The service management literature has helped answer some of the needs identified in the operation management literature:-

- 1) It has provided a conceptually and empirically developed set of quality characteristics that can be measured in service operations.
- 2) It has contributed to the understanding of customer satisfaction with the concept of service quality as customer expectations minus perceptions
- 3) It has helped in the understanding of how to minimise dissatisfaction through the application of service recovery principles.

Consumer research

Customer satisfaction and dissatisfaction is a key area of interest for consumer researchers (see for example Cardozo 1965, Bearden and Teel 1983, Wilkie 1986). The

subject has provided some greater and deeper insights into the nature of satisfaction and dissatisfaction, though much of the work in this area has, until quite recently, been product oriented (LaTour and Peat 1979, Churchill and Surprenant 1982). Furthermore, many consumer researchers seem to be shooting in the dark (Jacoby 1978) with little consideration of the relevance or applicability of what they are doing (see for example LaTour and Peat 1979, Tse and Wilton 1988, Olshavsky and Spreng 1989).

The central model on satisfaction in the consumer research literature is the disconfirmation theory which has been well developed and applied, primarily to product satisfaction (see for example Oliver and DeSarbo 1988, Cadotte et al 1987, Churchill and Surprenant 1982). This model is similar to the service quality view and holds that customer satisfaction is also a function of expectations and experience, and that the result is either confirmation, negative disconfirmation or positive disconfirmation. The confirmation area has been called a zone of indifference (Woodruff et al 1985) and there is some support for the view that experience in this zone may go largely unnoticed.

The consumer behaviour literature is clear that satisfaction is the result of disconfirmation (for example Churchill and Surprenant 1982). There is, however, an argument about whether satisfaction is a

cognitive or emotional response or an attitude (LaTour and Peat 1979, Day 1984, Jaranti and Jackson 1991).

What is interesting is that the consumer behaviour literature questions "expectations" as a base for comparison. Several pre-experience performance standards are suggested from ideal to minimum tolerable (for example Miller 1977, Tse and Wilton 1986).

There has been some recent discussion of the difference between customer satisfaction and service quality. The weight of opinion would suggest that satisfaction is transaction specific and service quality is an overall view (see for example Bolton and Drew 1991, Cronin and Taylor 1992).

Importantly there has been some conceptual development about the factors that lead to satisfaction and some which lead to dissatisfaction, but there has been only very limited empirical underpinning of this concept (see for example Cadotte and Turgeon 1988, Smith et al 1992). There has also been some recognition of the process of creating satisfaction and dissatisfaction (Tse and Wilton 1986) but this has focused on satisfaction at a transaction level (see for example Foxall 1990).

The consumer behaviour literature has contributed to some of the needs identified earlier. In particular it has

added to the understanding of customer satisfaction and dissatisfaction through:-

- 1) the nature of satisfaction and dissatisfaction
- 2) the development and application of the disconfirmation model
- 3) the range of pre-performance comparison standards that may be used by customers
- 4) the three outcomes; confirmation and positive and negative disconfirmation

Conclusion

It appears that operations management, service management and consumer behaviour researchers have been working almost independently in the area of quality. Whilst a number of references to the operations quality literature have been found in the service management literature, no references at all have been found in the consumer behaviour literature. In some ways this is not surprising because of the lack of service quality material in the operations literature. On the other hand, operations management has a significant body of knowledge on product quality measurement and control. There are very few references to the consumer behaviour literature in the service management literature and even

less in the operations literature, yet many useful tools and concepts exist here for understanding service quality.

A review of the other two literatures, service management and consumer behaviour, have helped to deal with, to some extent, some of the needs identified at the end of the section on operations management in this chapter.

However, there still appears to be a need to:-

- 1) integrate the three complimentary literatures, consumer behaviour, service management and operations management in order to understand better the nature of service quality
- 2) develop tools and techniques to help operations managers measure, control and improve service quality
- 3) understand better the nature of the process that develops satisfaction (or dissatisfaction) in the minds of the customers
- 4) identify the critical characteristics that lead to satisfaction and those that lead to dissatisfaction.

The rest of this research seeks to begin the process of meeting some of these needs. The next section attempts to integrate the operations, service management and

consumer behaviour literatures in order to develop a model which describes the process of satisfaction and dissatisfaction creation during a service process. The key concern for this thesis, however, is not the development or testing of this model but a small, yet significant, part of it; the identification of the critical characteristics, or switches, that lead to satisfaction or dissatisfaction. It is hoped that this will inspire the future development of tools and techniques to help operations managers measure, control and improve service quality

A SYNTHESIZED DYNAMIC MODEL OF CUSTOMER SATISFACTION IN SERVICE OPERATIONS

Edvardsson and Gustavsson (1990) argued that researchers have been paying too much attention to the service encounter without understanding the whole system. This section attempts to understand better the nature of the process that develops satisfaction (or dissatisfaction) in the minds of the customers by developing a model that depicts the "whole" system. The model has been developed by integrating contributions from the three literatures:-

- 1) from operations - the concept of operations as a process and in particular, the customer processing operation during which the customer's expectations

are moulded and their perceptions of service quality and satisfaction emerge

- 2) from service management - the customer perceived view of service quality, service recovery, the positive, negative and zero outcomes
- 3) from consumer behaviour - the disconfirmation model, the outcomes of the disconfirmation experience, the levels of satisfaction and the attitudes and behaviours that result from the disconfirmation experience.

The purpose of developing the model is to provide a contextual framework to identify the importance of identifying the critical characteristics that lead to satisfaction and those that lead to dissatisfaction and to help generate hypotheses for empirical testing.

Developing the model

From the review of the literatures there is a view that there are two levels of activity that create satisfaction and dissatisfaction; a micro or transaction level and a macro or "global" level.

At the micro level is the specific individual service transaction, a single moment of truth which leads to a feeling of satisfaction or dissatisfaction in the

customer (see for example Parasuraman et al 1988, Cooper et al 1989, Bolton and Drew 1991, Cronin and Taylor 1992).

Several authors have argued that the development of satisfaction is a more complex process and is the result of many transactions each with its own associated confirmation or disconfirmation "a process of multiple comparisons which might occur either simultaneously or sequentially" (Tse and Wilton 1986). This view of satisfaction as the result of a developmental process is also supported by Oliver and DeSarbo (1988), Swan (1992) and Erevlles and Leavitt (1992). This macro or "global" level comprises a process, a series of transactions, which leads to an overall feeling of satisfaction or dissatisfaction. There is, however, an ongoing debate as to whether the result of the "global" level is satisfaction or service quality (see for example Cardozo 1965, Churchill and Surprenant 1982, Parasuraman et al 1988, Cooper et al 1989, Bolton and Drew 1991, Cronin and Taylor 1992).

The relationship between these two levels is depicted in figure 6.1.

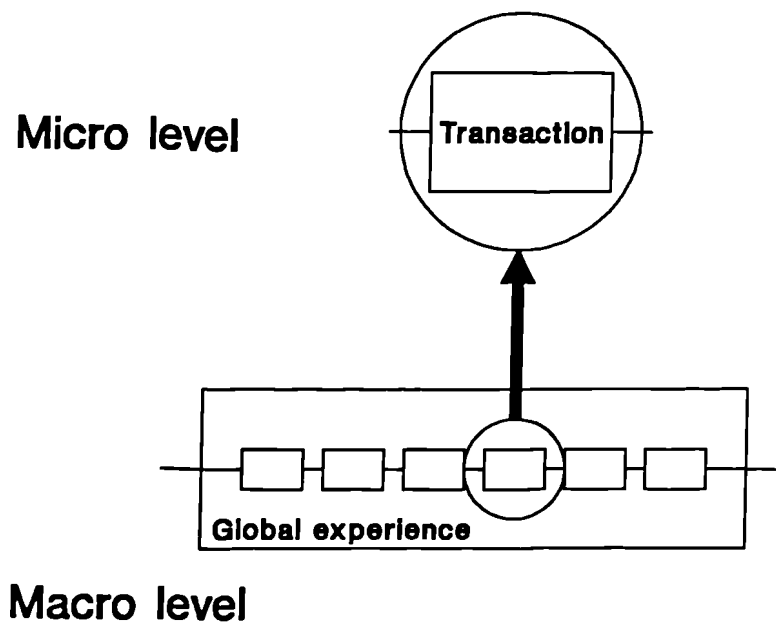


Figure 6.1 Two levels of activity that create satisfaction and dissatisfaction

What is missing in the literature, as identified by Kennedy and Thirkell (1988) is an understanding of how these two levels interact.

The consumer behaviour literature, and to a lesser extent the service management literature, have provided considerable detail about the individual transaction. It is proposed that the disconfirmation model of satisfaction at an individual level can be aggregated into a global model of satisfaction.

1) The transaction level

At the transaction level customers have expectations, they experience the transaction and there is an outcome. The expectations are a set of pre-experience needs, desires or wants (see for example Lehtinen 1983, Grönroos 1984, Berry et al 1985, Gummesson 1989). They are based on personal needs, the effect of word of mouth or personal experiences about that type of transaction (see for example Berry et al 1985, Zeithaml et al 1990, Engel et al 1993). The expectations will have associated levels of expected performance; pre-experience comparison standards (see for example Miller 1977, Oliver 1980, Woodruff et al 1985, Tse and Wilton 1986, Cadotte et al 1987, Holbrook 1987, Olshavsky and Spreng 1989). The disconfirmation model holds that there are three main outcomes from the experience, disconfirmation (+, 0 or -), (see for example Woodruff et al 1985, Swan 1988, Tse and Wilton 1988, Oliver and DeSarbo 1988, Cooper et al 1989, Vezina and Nicosia 1990, Bolton and Drew 1991, Mattsson, 1991). This leads to an attitude, or an effect on attitude (see for example LaTour and Peat 1979, Oliver 1980, Swan 1988, Mattsson 1991, Jaranti and Jackson 1991, Drew and Bolton 1991) that will affect future expectations and behaviour that will be carried forward into future transactions (see for example Cardozo 1965, Churchill and Surprenant 1982, Bearden and Teel 1983, LaBarbera and Mazursky 1983, Wilkie 1986, Engel et al 1993). This is summarised in figure 6.2.

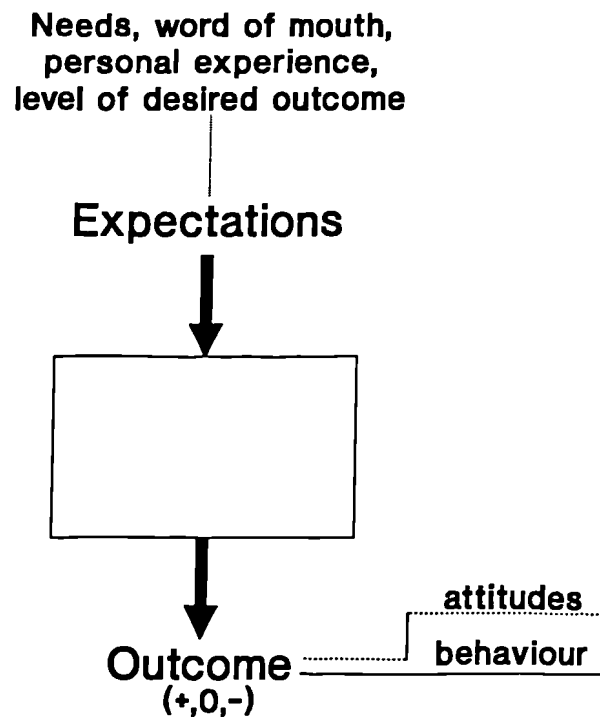


Figure 6.2 A transaction, inputs and outputs

2) The "global" level

The service management literature suggests that a service process is a series of service transactions through which the customer passes (see for example Shostack 1984, Shostack 1987, Johnston 1987). The expectations of each individual transaction in the service process will be a function of the customer's needs, word of mouth and previous experiences and the level of desired outcome (see for example Berry et al 1985, Zeithaml et al 1990), which may be tempered by an attitude resulting from the previous service transaction, which in turn is a function

of the disconfirmation experienced in the previous transaction (see for example Churchill and Surprenant 1982, Bearden and Teel 1983, LaBarbera and Mazursky 1983). In service operations, as the customer often plays an active part in the process, his or her behaviour may be influenced and modified by the previous transaction experience (see for example Mills and Morris 1986, Bowen 1986, Johnston 1989, Kelley et al 1990).

As such the total experience is the result of the series of individual micro transactions which all combine to create a macro experience whose overall outcome is a feeling of satisfaction which will influence future behaviour and buying intentions. The whole service experience is based upon a set of pre-experience expectations compared to the results of a dynamic service process, resulting in an overall outcome, a feeling of satisfaction, dissatisfaction or adequacy that may be felt immediately after the event and may be tempered as time passes decaying into an overall feeling of satisfaction (or service quality). This feeling, whether rational or emotional, will affect attitude to this service and others and to future behaviour (Engel et al 1993). This total experience, as a sum of the micro transactions is depicted in figure 6.3.

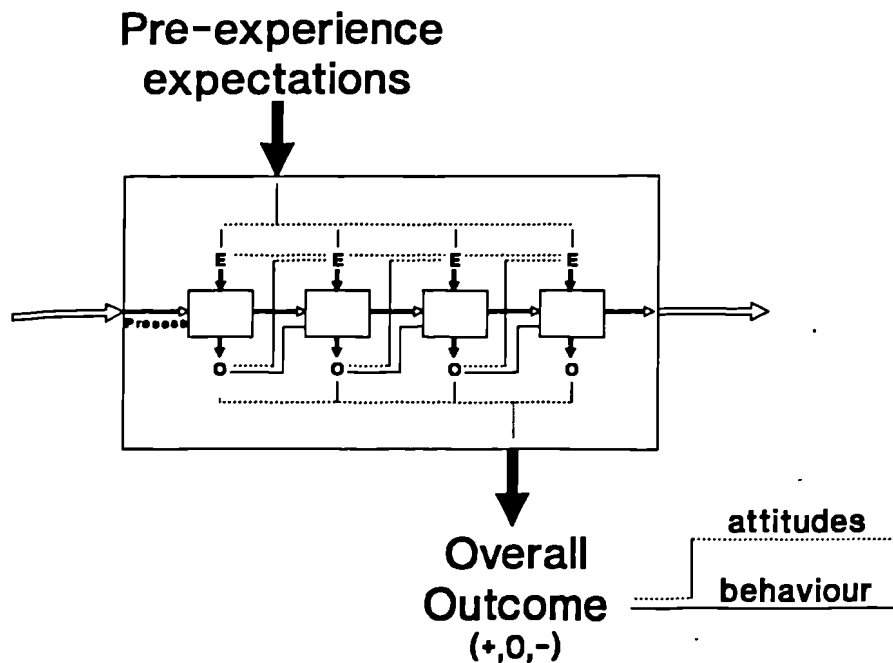


Figure 6.3 A dynamic model of customer satisfaction in a service operation

The model raises a number interesting questions:-

- 1) What is the interplay between the outcome of one transaction and the next transaction? For example, does the level of expectations change during the process? For example, if the outcome is negative disconfirmation (-) does this:-
 - a) lead to a reduction in the level of expectations for the next transaction, because one transaction was bad, does the customer then amend expectations downwards? He or she might have expected an ideal experience, as a result

of it being less than ideal are expectations reduced for the next transaction?

Or

b) does it lead to an increase in expectations, a feeling by the customer that the transaction will have to be better than expected to make up for the previous negative experience?

2) What is the interplay between the outcome of the transactions and the overall view of quality? For example,

a) how do the various +, 0 and - merge and trade off? Do some pluses counteract some minuses? How do they merge to create an overall view of satisfaction in the customer mind?

b) By the end of the process, is it just the results of the individual transactions that create an overall feeling of satisfaction or dissatisfaction or neutrality, or do the initial pre-experience expectations still play apart?

3) How does the pre-experience base affect the outcome? Does the level of the pre-experience expectations affect the likelihood of satisfaction or

dissatisfaction? If one's expectations are ideal, is it more likely that the outcome will be minus, or at best zero. However, if one's expectations were minimum tolerable is a positive outcome more likely? (See figure 6.4.)

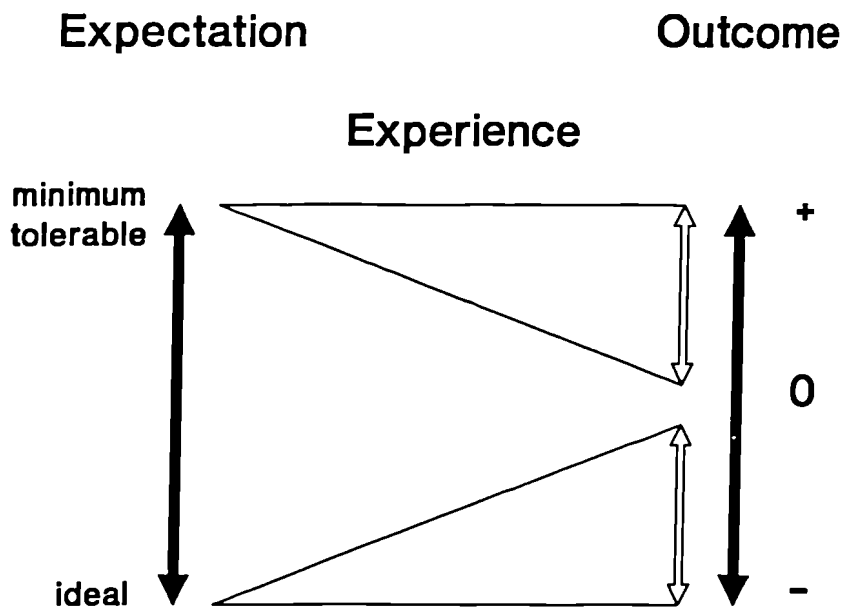


Figure 6.4 Interplay between pre-experience standard and outcome

- 4) What is the effect of time on overall satisfaction and dissatisfaction? Does dissatisfaction increase, or decay to adequacy? Does satisfaction increase, or decay to adequacy? (See figure 6.5.)

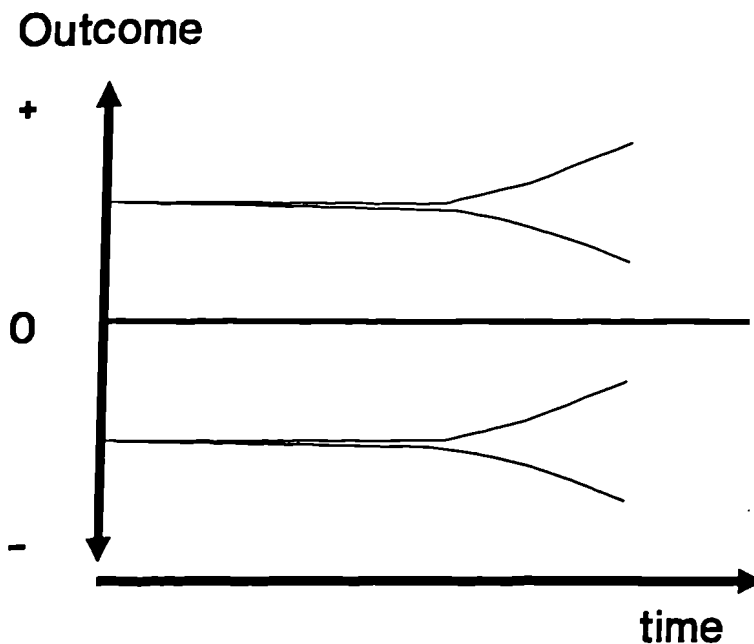


Figure 6.5 Satisfaction - decay or increase over time?

- 5) Where does recovery fit in? Presumably, recovery is a separate process that the operation may be able to initiate if a negative experience is detected. Also, recovery can take place at the transaction level or at a global level. Should a recovery process be built into the model?

The literature suggests that customers have expectations about a recovery process and that the outcomes will affect future attitudes and behaviour. Figure 6.6 shows the addition of a recovery transaction to the service experience (whether micro or macro).

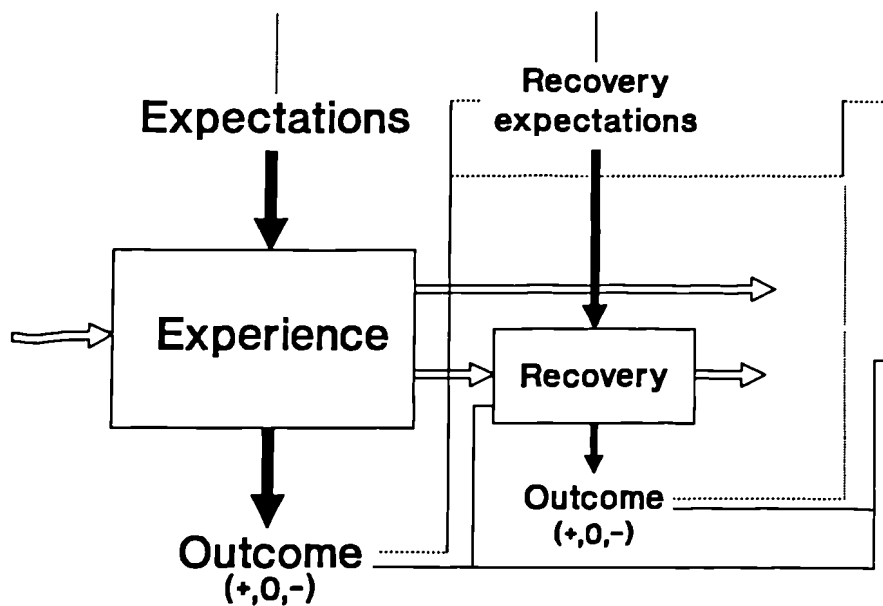


Figure 6.6 Service recovery - an extension of the satisfaction model

- 6) What are the characteristics of service that create negatives and positives? What are the characteristics of service that the operation needs to control to ensure that the outcome is satisfaction and not dissatisfaction?

Whilst each of these questions could be chosen to be the subject of this research, it is the last one, number six, that has been selected for a number of reasons. Firstly the identification of service quality characteristics is a key gap in the operations management literature. The strength of OM is its interest in controlling quality through its established quality control tools and

techniques. These techniques are, however, useless until the quality characteristics that need to be controlled have been firmly established. This question also builds upon the consumer behaviour and service management literature. The suggestion of the negative and positive influence is based upon the disconfirmation model, and there exists already a number of generic service quality characteristics in the service management literature though their relative effect on satisfaction and/or dissatisfaction is not known.

Furthermore, and importantly, this research question is not contingent upon finding solutions to the other questions that have been raised about the satisfaction and dissatisfaction process.

Satisfaction as a process - the issues raised in points one to five above question the process of the development of a state of satisfaction or dissatisfaction. Though the questions raised are pertinent, and indeed complex, the research question focuses on the end result and the critical characteristics that lead to that state. Its answer does not require an understanding of the mental processes that brought it about. It seeks to find the causal characteristics not to identify the process.

Pre-experience standards - to answer the research question one does not need to know whether the customer's pre-experience standards are ideal or even minimum tolerable, as it is concerned with the causes that send a customer over the threshold, irrespective of what that threshold was.

The nature of satisfaction - one does not need to know whether satisfaction is a cognitive or an emotional response, as this research is concerned with the causes and not the type of mental state of a customer.

However, having an answer to the chosen research question would facilitate the investigation of the other questions. It is hoped that this research will be a significant step in this direction.

HYPOTHESIS DEVELOPMENT

This research is concerned with identifying the service characteristics that create satisfaction and dissatisfaction. The three literatures and the above model provide a conceptual underpinning for this question. It is concerned with the very experience from the customer's point of view and seeks to understand what characteristics switch customers from zero to plus or zero to minus. It focuses on the activities inside the service operation and their outcome.

This research will address three main issues. First, it is proposed that the various quality factors have different effects on the outcome of the service experience in the customer's mind, ie some factors are more important than others. This suggestion that there are sets of critical, and not so critical, characteristics is intuitively appealing. Indeed, back in 1968, Myers and Alpert argued that only a limited set of attributes play a critical role in choosing between alternatives. More recently Parasuraman et al (1985) and Johnston and Lyth (1989) have argued that the relative weighting of the quality factors will vary considerably. However, the relative effect of individual quality factors has not yet been identified for service situations. This leads to the first hypothesis:-

HYPOTHESIS 1 Not all service quality factors have the same effect on satisfaction or dissatisfaction.

Second, the existing research has suggested that there are three outcome states, plus, zero and minus, (positive disconfirmation, confirmation and negative disconfirmation) but it is far from clear what are the determining attributes that create these states. Some exploratory research has provided some initial suggestions (see for example Swan and Combs 1976, Maddox 1981, Hausknecht 1988, Mersha and Adlakha 1992 and Smith

et al 1992). These studies, however, had several major drawbacks for example:-

- * most studies were predominantly product based
- * some studies used very broad categories of attributes
- * the two key studies used unrepresentative and small samples
- * no study took account of the effects of recovery on satisfaction.

It is suggested, in line with the two noticeable outcomes of the disconfirmation paradigm, that there are two types of quality factors: satisfying factors and dissatisfying factors and in support of the recovery literature, that there is also a set of factors which supports the recovery process.

It is proposed that:-

- satisfying factors are those quality factors which primarily result in positive disconfirmation then satisfaction as they tend to enhance a customer's perception of the service.
- dissatisfaction factors, by contrast, are those factors which are primarily a cause of negative disconfirmation. If there is no recovery process

then the negative disconfirmation becomes dissatisfaction.

- recovery factors are those quality factors which can turn negative disconfirmation into positive disconfirmation and then satisfaction. These factors turn a potentially dissatisfying situation into a satisfying one.

HYPOTHESIS 2 There are three types of service quality factors; satisfying, dissatisfying and recovery factors.

Hypothesis 2a Satisfying factors result in positive disconfirmation and then satisfaction.

Hypothesis 2b Dissatisfying factors result in negative disconfirmation and then dissatisfaction if there is no recovery.

Hypothesis 2c Recovery factors can turn negative disconfirmation into satisfaction.

Thirdly, it is suggested that these types of service quality factors are mutually exclusive, that is any single factor is either only a satisfier (an enhancing factor) or a dissatisfier (a hygiene factor) or a

recovery factor. This suggestion is, in part, inspired by the work of Herzberg et al (1959) who distinguished between hygiene and motivating factors to explain employee behaviour in the work place. This split was also suggested by Johnston and Lyth 1988 and the subject of a study by Cadotte and Turgeon also in 1988. Johnston and Lyth, however, did not provide any empirical support nor did they take account of the impact of the recovery process on dissatisfaction. Cadotte and Turgeon, also did not take into account recovery, but more importantly they only used service quality as a single generic variable, and so there was no detail about precisely what caused satisfaction or dissatisfaction. Another drawback of their study was that their data source was complaints and compliments (in the hospitality industry) which may only identify the very extremes of satisfaction and dissatisfaction in an unrepresentative selection of customers.

It is suggested that:-

- enhancing factors, which when in evidence and above a certain threshold, result in satisfaction, however, when not in evidence, they do not detract from the service, that is, they do not result in dissatisfaction.
- hygiene factors, when in evidence, result in negative disconfirmation and then dissatisfaction if

there is no recovery, however, when not in evidence they do not result in an enhanced perception of the level of service provided, that is, they do not result in satisfaction.

- recovery factors are *only* those quality factors which turn negative disconfirmation into positive disconfirmation and then satisfaction.

HYPOTHESIS 3 The factors in the three categories are mutually exclusive.

Hypothesis 3a Enhancing factors do not result in dissatisfaction.

Hypothesis 3b Hygiene factors do not result in satisfaction.

Hypothesis 3c Recovery factors are different from enhancing factors.

IMPLICATIONS OF THIS RESEARCH

This work will deal with the needs of operations management identified earlier. It will help provide a more service oriented operations management literature. It will integrate the operations literature with that of other functions and disciplines. It will also lead to a better understanding of the nature of customer

dissatisfaction/service quality which will help operations managers develop and design techniques to monitor and control it.

This work will address a gap in the three literatures. For the operations management literature it will provide service quality factors to which it can apply its tried and tested control models. For service management it will identify the key service quality factors. For consumer behaviour it will provide an application of the disconfirmation model, sharpen the satisfaction models and lead directly to an identification of factors that create satisfaction and dissatisfaction. It is hoped that this work can be used as a basis for prediction of satisfactory quality outcomes in a broad range of service situations and will be the base for a theory on satisfying and dissatisfying quality factors.

It is a timely piece of research as operations management is trying to respond to the service imperative. It is also timely as the boundaries between the operations, service management and consumer behaviour are being breached. This work will continue this embryonic trend to capitalise on cross functional activities and develop cross disciplinary material.

From a practical point of view, it is hoped that the research will provide a base for management action by addressing a current concern of many service and

manufacturing managers, the provision of customer satisfaction. It is hoped that it will identify the critical characteristics of service quality that managers need to measure and control. It will further identify those that need to be controlled carefully to ensure that dissatisfaction does not occur (if service quality is a qualifying competitive criterion). It will identify those factors that need to be developed if service quality is an order winning criterion. Furthermore, it will identify those characteristics that are needed within a recovery process to deal with service failure and gain satisfaction from it. The research will provide a new, service oriented tool to allow managers to take a proactive approach to service quality management. It will help managers identify the key areas for management action and the likely consequences of action, or inaction.

THE SERVICE QUALITY FACTORS: SATISFACTION, DISSATISFACTION AND RECOVERY

Volume 2 of 2

Robert Johnston

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Chapter 7

METHODOLOGY

SUMMARY

The objective of this chapter is to identify an appropriate methodology for this research.

The chapter begins by assessing a range of research philosophies. The purpose of this is to try to ensure that the methodology chosen for this research is appropriate to the object of the study and to make explicit the researcher's viewpoint. A range of research paradigms are described using two dimensions, rational to existential and natural to artificial. These are then applied to operations management research in general and to this research in particular.

As a result of this discussion the key macro research questions are discussed and an appropriate research method chosen. It is proposed to use the critical incident technique (CIT) to try to identify satisfying, dissatisfying and recovery factors. This is based upon a logical positivist/empiricist approach using customer's perceptions of reality. This somewhat breaks away from the traditional mould of operations management research, much of which has been based upon the axiomatic approach using an artificial construction of reality.

The study will be split into two phases. First a pilot study will take a convenience sample in order quickly to provide an understanding of the causes of satisfaction and dissatisfaction, and evaluate the research design and the survey instrument before the main study. In particular, it will check to see if recovery situations can be identified using this technique. The main study, subject to the findings in the pilot study, will repeat the CIT using systematic random stratified samples of customers from a representative set of service organisations.

The method of analysing the data will be similar to that used by Herzberg et al (1959). This involves the factor analysis of customers' anecdotes of satisfying and dissatisfying service situations.

INTRODUCTION

The objective of this chapter is to identify an appropriate methodology for this research.

The first part of the chapter explores a range of research philosophies and applies them to operations management research in general and to this research in particular.

The second section deals with the macro research questions.

The third section assesses several different alternative research methods.

The fourth section develops the detailed research design for the chosen research method.

RESEARCH PHILOSOPHY

In selecting a research methodology it is important to be aware of the range of philosophies and approaches that exist to try to ensure that the methodology chosen is appropriate to the object of the study and to make explicit the researcher's viewpoint.

A number of frameworks for classifying research paradigms have been put forward, for example formalism or empiricism (Beged-Dov and Klein 1970) and Cartesian Dualism (Scruton 1981). Other authors have proposed continua of philosophies which incorporate a range of research paradigms. Hirschman and Holbrook (1992) for example, suggested a continuum with material determinism and mental determinism at its extremes. Along this dimension is included empiricism, ethnomethodology, interpretivism, subjectivism and rationalism. Meredith et al (1989) suggested that there is a continuum of research philosophies ranging from rational to existential, including axiomatic, logical positivist/empiricist, interpretive, and critical theory paradigms.

Whilst any such framework could be chosen to guide and evaluate this research, it is proposed to use the framework suggested by Meredith et al for two reasons:-

- 1) Meredith et al have applied their framework specifically to operations management research. Indeed they have developed and used their continuum to classify, and challenge, operations management research.
- 2) They also combined this dimension with a second dimension that is concerned with the source and kind

of information used in the research, the natural/artificial dimension. The form of data is perceived to be a key issue for this research as satisfaction, by its very nature, is based upon a user's view of quality not the traditional manufacturing/operations based internal quality perspective.

The following sections describe the two dimensions provided by Meredith et al and then apply them to operations management research in general and to this research in particular.

The rational to existential dimension

The rational to existential dimension concerns the nature of truth and whether it is purely logical and independent of man or whether it can only be defined relative to individual experience. Meredith et al (1989) identified four main perspectives on this continuum; axiomatic, logical positivist/empiricist, interpretive, and critical theory.

1) Axiomatic

The axiomatic approach, according to Meredith et al, represents a theorem-proof world of research where a high degree of knowledge is assumed about the socio-technical

structure of organisations. Hirschman and Holbrook (1992) support this view recognising that this paradigm assumes a rationalist position based upon the view that ideas are innate and that truth emerges from the application of pure reason. This is the perspective taken by, for example, operations researchers and some operations management researchers whose work is concerned with formal procedures (for example economic order quantity modelling), and consistency of goals (for example cost minimisation) (see for example Collier 1991, Walker 1992, Woodruff and Spearman 1992).

2) Logical positivist/empiricist

This approach assumes that the phenomenon in the study can be isolated from the context in which it occurs. This is the basis for most survey research and is widely accepted and used in the operations management literature (see for example Bartezzaghi et al 1992 and Ward et al 1992). Implied in Meredith et al's description is that the object of the study can be defined, measured and the relationships between the factors understood. This is not always the case especially in the search for "good" or "successful" management yet this is a key aspect of empiricism (Morgan and Smircich 1980). A critical point is added by Hirschman and Holbrook (1992) who claimed that empiricism encourages a more sceptical approach than the rationalist, questioning the assumptions in causal

relationships, though this scepticism is not always apparent in the operations literature.

This paradigm is also prevalent in the main stream consumer behaviour literature (see for example Hunt 1983, Halstead 1989, Drew and Bolton 1991 and Dagenais and Duhaime 1992).

3) Interpretive

The interpretive paradigm includes the context of the phenomenon as part of the object of the study. This is the study of hermeneutics (interpretation), semiotics (signs) and structural criticism (the shaping of hermeneutic interpretation by a series of binary oppositions). The purpose of the interpretative paradigm is to construe how others conceptualise and understand events and concepts. Few pieces of operations management research could be construed as fitting into this category. Two notable examples would include the joint venture between INSEAD and Boston University implementing the Manufacturing Futures Survey (Ferdows et al 1986) and Roth and Van Der Velde (1987) who evaluated the delivery systems employed by US retail banks in order to identify possible future banking strategies.

It seems that this paradigm is not greatly employed in the consumer research area either as Hirschman and

Holbrook (1992), for example, argued for its wider application.

4) Critical theory

Critical theory, or subjectivism, defines the nature of truth as being defined by an individual's experience.

Hirschman and Holbrook (1992) would also include phenomenology and existentialism in this approach.

Phenomenology adopts primarily a psychological focus on the individual rather than groups or culture.

Existentialism focuses much more on the existence of the individual "leaving open all questions concerning the external material world" (Hirschman and Holbrook 1992).

Meredith et al (1989) found no examples of this approach in the operations management literature though they did not provide any reasons to explain this.

Interestingly Hirschman and Holbrook (1992) also suggested that there was little consumer research that could be thus classified though they suggested that there may be only limited opportunities for its application.

Natural/artificial dimension

Meredith et al's second dimension, the natural/artificial dimension, is based upon a similar dimension proposed in an unpublished piece of work referred to by Meredith (by

Mitroff and Mason 1984) to account for the source and kind of information used in the research as well as the research philosophy itself. Meredith et al developed Mitroff and Mason's work and proposed that the data sources researchers use vary from the natural, direct observation of object reality, through using people's perceptions of object reality to the artificial reconstruction of reality.

1) Natural

At the natural end of the continuum is empiricism. This approach is concerned with deriving explanations from concrete, objective data, based on an assumption that there is an objective reality and that it can be detected. This observation may be subject to formal structural (axiomatic) analysis or to interpretation using critical theory.

2) People's perception of reality

This is research conducted through somebody else's eyes as in surveys, interviews or experimentation. This, though not pointed out by Meredith et al, puts emphasis on interpretation from the "actor's" own perspective and is usually referred to as a phenomenological approach (Taylor and Bogdan 1984) or subjectivism (Hirschman and Holbrook 1992).

3) Artificial

This is the artificial construction of models or simulations, for example, that put object reality into a form suitable for testing and experimentation.

Meredith et al (1989) combined these two dimensions into a generic research framework see figure 7.1.

	NATURAL		ARTIFICIAL
	DIRECT OBSERVATION OF OBJECT REALITY	PEOPLE'S PERCEPTIONS OF OBJECT REALITY	ARTIFICIAL CONSTRUCTION OF OBJECT REALITY
RATIONAL			
AXIOMATIC			
LOGICAL POSITIVIST/ EMPIRICIST			
INTERPRETIVE			
CRITICAL THEORY			
EXISTENTIAL			

Figure 7.1 A generic research framework

Operations management research paradigms

Much operations management research is, and has been, based upon the axiomatic approach using an artificial construction of reality. Meredith et al (1989), for example, reviewed the operations management publications in Management Science, Decision Sciences and the Journal of Operations Management for 1977 and 1987 and classified the research contained therein according to the generic framework. Figure 7.2 provides a summary of their findings.

	NATURAL		ARTIFICIAL
	DIRECT OBSERVATION OF OBJECT REALITY	PEOPLE'S PERCEPTIONS OF OBJECT REALITY	ARTIFICIAL CONSTRUCTION OF OBJECT REALITY
RATIONAL			
AXIOMATIC			62%
LOGICAL POSITIVIST/ EMPIRICIST		1%	28%
INTERPRETIVE	5%	1%	3%
CRITICAL THEORY			
EXISTENTIAL			(n=95)

Figure 7.2 A summary of the classification of OM literature

Most of the papers, 93 per cent, used an artificial construction of reality and 91 per cent applied the

axiomatic and/or the logical positivist/empiricist highly rationalistic paradigms.

One might argue that this approach is less prevalent in Europe where empirically-based and qualitative research is more acceptable. A brief analysis of volume 12, 1992, of the UK-based International Journal of Operations and Production Management is summarised in figure 7.3.

	NATURAL		ARTIFICIAL
	DIRECT OBSERVATION OF OBJECT REALITY	PEOPLE'S PERCEPTIONS OF OBJECT REALITY	ARTIFICIAL CONSTRUCTION OF OBJECT REALITY
RATIONAL			
AXIOMATIC			38% (16%)
LOGICAL POSITIVIST/ EMPIRICIST		26% (4%)	28% (6%)
INTERPRETIVE	2%	3%	3%
CRITICAL THEORY			
EXISTENTIAL			(n=68)

Figure 7.3 The research paradigms in volume 12 of IJOPM

The figures in parentheses are those papers whose first named authors are from the United States. The remaining papers, while mainly from Europe include a few contributions from other parts of the World. Although this analysis is too limited to be conclusive it would

suggest that there is some difference between the non-USA and USA research paradigms. This British-based journal includes a significantly higher proportion of empirically-based papers and has a much smaller emphasis on the "traditional" quantitative modelling type work. It is interesting to note the predominance of USA papers in this latter category.

One might further argue that the logical/positivist paradigm using artificial constructs of reality is also less prevalent in research into service situations. Whilst Management Science, Decision Sciences, Journal of Operations Management and the International Journal of Operations and Production Management are primarily concerned with reporting research into production issues, the International Journal of Service Industry Management is exclusively concerned with service research. A brief analysis of volumes one to three is contained in figure 7.4.

There is here an even greater shift toward using more natural data sources and there are many examples of the use of the interpretive paradigm. Although the sample is rather small and the analysis too superficial to be conclusive, it would suggest that there is a difference between the predominant research philosophies in the manufacturing and service sector. The figures in the table too, support the difference between Europe and the

USA. The figures in parentheses, the percentage of papers with American first authors, show the tendency of the Americans, even those engaged in service research, to concentrate on the development of simulations and normative modelling.

RATIONAL	NATURAL	ARTIFICIAL	
	DIRECT OBSERVATION OF OBJECT REALITY	PEOPLE'S PERCEPTIONS OF OBJECT REALITY	ARTIFICIAL CONSTRUCTION OF OBJECT REALITY
AXIOMATIC		3%	16% (13%)
LOGICAL POSITIVIST/ EMPIRICIST	3%	48% (13%)	39% (19%)
INTERPRETIVE	16% (3%)	10%	13%
CRITICAL THEORY			
EXISTENTIAL			(n=31)

Figure 7.4 The research paradigms in volumes 1,2 and 3 of IJSIM

Figure 7.5 shows the focus of the dominant research paradigms for USA and non-USA based research in the production and service sectors.

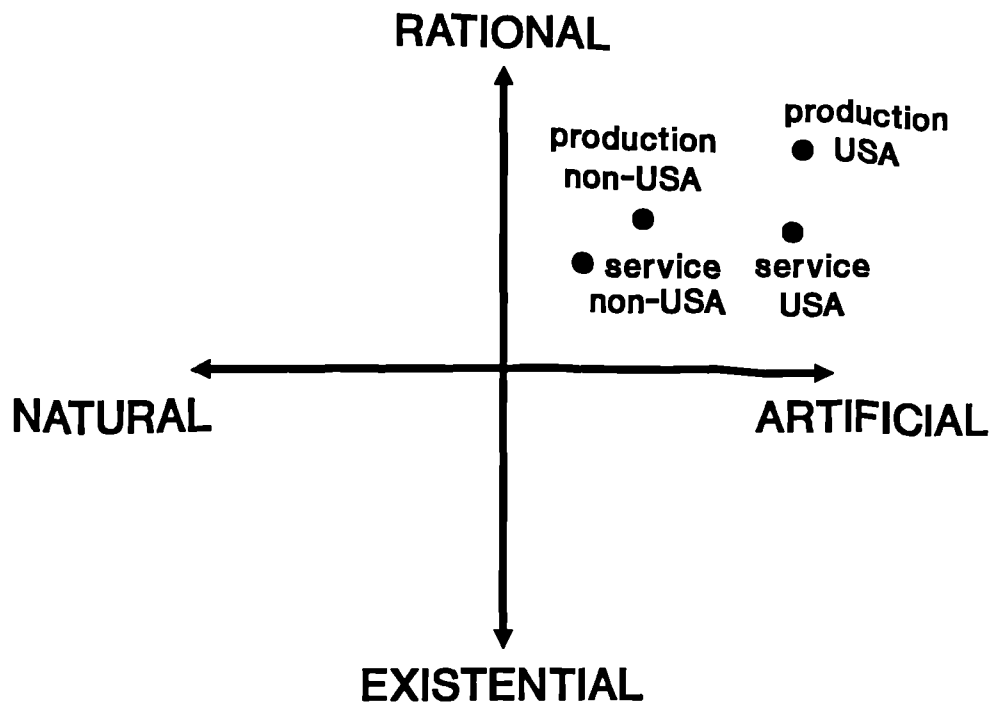


Figure 7.5 Classification of dominant research paradigms

From the above analysis it can be seen that not all operations management research is, as Meredith et al concluded, axiomatic, based on artificial constructions of reality. There is some evidence of the use of interpretive approaches and the use of more natural data, more outside the USA and associated more with service research. However, the foci of the research philosophies are contained within the top right hand quadrant, suggesting that, in general, operations management research is predominantly based on the more rational axiomatic or logical positivist/empiricist paradigms, using primarily artificial reconstructions of object

realities, with some use of people's perceptions of object reality.

It is somewhat surprising, given the applied nature of operations management, that OM research, particularly into production issues in the USA, should be primarily based on the axiomatic paradigm using an artificial construction of reality. It is understandable then that some academics have argued that much OM research has not been very useful to OM practitioners (see for example Buffa, 1981 and Miller and Graham, 1981). Indeed Andrew and Johnson (1982) stated that "managers looked at this 'research' and found that they could neither understand the solutions being posed or the problems the OM researchers thought they were addressing".

Why is this so? One reason is the heritage and history of operations management as explained in chapter two. Operations management is a scientific, modelling-based discipline which has arisen out of Taylorism and operations research. This has created a view of respectability (Flynn et al 1990) and acceptability (Chase 1980) of operations management research as being based upon traditional mathematical formulation and simulation studies. This "reality" is then perpetuated in universities where such approaches are seen to be less risky than more empirical based, interpretive methodologies, in the "publish or perish" environment of

many research-oriented universities (Chase 1980). A further reason is that simulation type studies are easier to undertake than empirical studies which often require significant time and resources, firstly in the validation of the instruments and then in the collection of the data.

As a result the operations management community, particularly in the United States, has tended to view empirical research as less esteemed than research based on mathematical modelling (Flynn et al 1990).

The changing nature of OM research

There have been calls for OM to adopt a broader and more varied set of research methodologies. Chase (1980) stated that "we cannot avoid some high risk research if we are to capture the critical characteristics which are contained in the management component of the operations management field". Meredith et al (1989) were particularly critical of the overwhelmingly artificial type of research carried out in OM. They believed that the field of OM faces new research challenges, particularly in the area of service operations, and suggested that there needs to be an acceptance of other research paradigms in OM that other fields have accepted as rigorous. This view has been supported by other writers. Miller and Graham (1981), for example, called

for a more integrative view of operations' role in organisations and suggested the need to search other literatures to support the development of OM. Groff and Clark (1981) called for a wider array of research methodologies. Sullivan (1982) suggested that the subject needs to become more cross disciplinary.

Meredith et al (1989) specifically called for a move away from the more rationalist, scientific approaches to more naturalistic paradigms (especially direct observation via case, action and field studies) employing an existential (primarily interpretative) paradigm. They added that such "methods are accesible, their legitimacy proven, and the need is great." They concluded that "In general the development of the field of operations management will be enhanced by empirical work". This view was also supported by Flynn et al (1990) who claimed that "All types of empirical work are needed". They added that "Development of a theory base in operations management has been neglected, empirical research provides a powerful tool for building and verifying theory ... empirical research is well established in other fields and researchers on OM should not be afraid to learn from their colleagues in other areas".

Over the last few years there have been some changes in the approaches taken by the production-based operations management researchers. Flynn et al (1990) claimed to

have witnessed a transition in the nature of operations management research from modelling activities to more empirically-based work. It would appear however, that the non USA service-based researchers have already taken these steps.

The nature of this research

This section applies Meredith et al's framework to the object of this study; customer satisfaction and dissatisfaction during, and as a result of, a service operation.

1) Natural or artificial?

The very nature of research into the operational implications of customer satisfaction would suggest that it would be inappropriate to deal with an artificial construction of reality, as it is people's perception of satisfaction that is the object of the study. At the other end of the scale, direct observation too is also inappropriate as it would assume a direct correlation between the feeling of satisfaction and overt behaviour. This is not necessarily the case as disappointed people may still return to purchase despite their experiences, and satisfied customers may use alternative suppliers for reasons little to do with their previous experiences. It is more appropriate that the kind and source of data used

in this research is people's, or specifically customers', perceptions of satisfaction. The most appropriate view of object reality taken by this piece of research is that of the customer.

2) Rational or existential?

An axiomatic paradigm assumes the existence of clear structures and procedures; an ordered world. Satisfaction does not fit comfortably with this paradigm. Satisfaction is a mental construct, emotional or cognitive (see for example Hunt 1977, Oliver 1980, Swan 1988, Mattsson 1992a), and not necessarily the calculated result of ordered analysis.

The logical positivist/empiricist paradigm assumes that the phenomenon for research can be isolated from the context. Satisfaction is the result of a context, a situation taking place, so cannot be said to be context free, but on the other hand has to be isolated from it in order to analyse and understand it. Given that research into the causes of satisfaction and dissatisfaction is in its early stages, this approach may be an appropriate first step.

The interpretive perspective seems an ideal paradigm as it is concerned with understanding, and interpreting, the service quality phenomenon from a customer's perspective.

However the nature of customer satisfaction during service operations is complex as many and varied causal factors may be involved in the development of a feeling of satisfaction (see for example LaTour and Peat 1979, Churchill and Surprenant 1982, Cadotte et al 1987, Bloemer and Polesz 1989, Drew and Bolton 1991). This approach might be more appropriate for a deeper perspective once the causes of satisfaction and dissatisfaction have been isolated.

Critical theory, or subjectivism, holds that the individual's view of reality is the result of their interaction with external objects and that truth can only be defined relative to individual experience. This is an appropriate paradigm for the study of satisfaction as it is defined relative to the individual's experiences and expectations (see for example Miller 1977, Churchill and Surprenant 1982, Woodruff et al 1985, Tse and Wilton 1986, Cadotte et al 1987, Oliver and DeSarbo 1988, Spreng and Olshavsky 1992). However, given the state of knowledge on customer satisfaction in service situations and the operations management/operations research background of the researcher, the adoption of this paradigm seems over optimistic.

The dynamic model of satisfaction in service situations developed in the last chapter (figure 6.3) may provide a vehicle for testing the development of satisfaction

during a service process and lead to a more interpretive perspective. However, given the limited understanding of satisfaction and its development in service operations, this research, in order to best fit with the background and abilities of the researcher, will be limited to a logical positivist/empiricist approach using customers' perceptions of reality. Figure 7.6 shows how this proposed research fits with the other operations management research paradigms identified earlier.

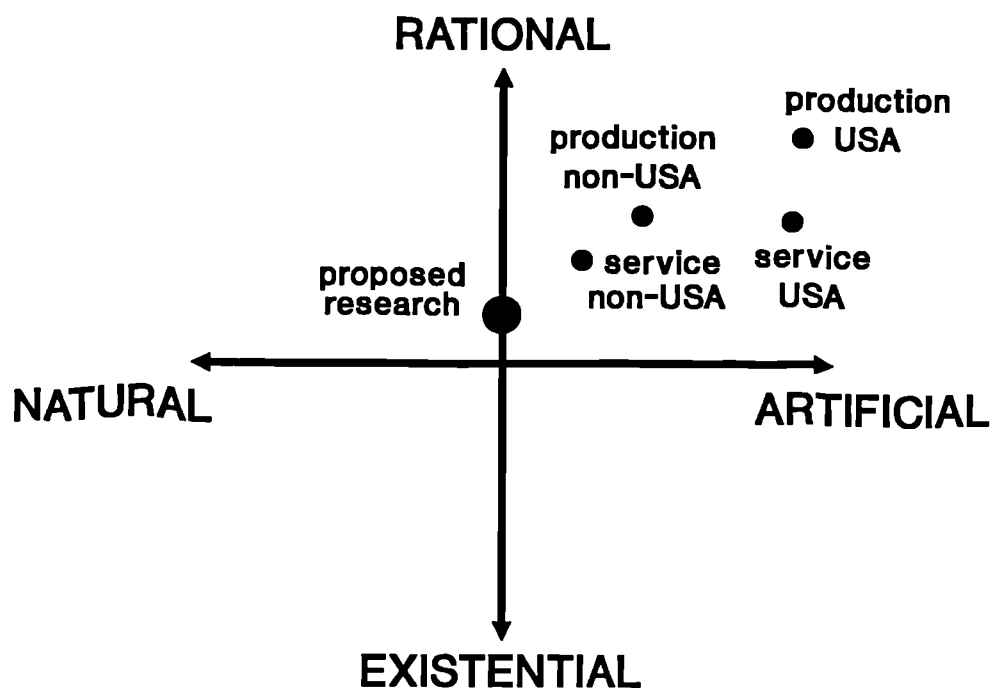


Figure 7.6 The proposed research paradigm

It is proposed that this research will use as its data source the service customer's view of reality. It will employ a logical positivist/empiricist approach requiring

the artificial separation of the object, satisfaction, from the context, to create theories about it that can be tested at a later stage in a situational context using a more interpretive paradigm. As such, this work will continue the trend away from the traditional axiomatic, artificially-based research approach, traditional in operations management, as advocated by, for example, Meredith et al (1989) and Flynn et al (1990).

MACRO RESEARCH QUESTIONS

The discussion and identification of an appropriate philosophy for this research whilst guiding towards a detailed research method leaves three important questions which require further consideration, namely:-

- 1) What is the nature of the research? Should it be applied research or basic research?
- 2) Should the research be empirically-based or employ a mathematical modelling approach?
- 3) Should the data analysis be primarily qualitative or quantitative in nature?

1) Applied research or basic research

The first question concerns the nature of the research. Is this research a piece of basic research or is it applied?

Basic research (or pure research) is concerned with the development of theories, philosophy and advancement of management disciplines (Gummesson 1991). It does not directly involve a solution to a particular problem and its findings cannot generally be immediately implemented (Zikmund, 1991). In the service operations literature, for example, many papers have been concerned with the development of theory. Maister (1983), Schmenner (1986), Wemmerlöv (1990), Haynes (1990), Silvestro et al (1992), for example, have been trying to develop a coherent and comprehensive taxonomy for service industries. Heskett (1986), Armistead (1990) and Chase and Hayes (1990) have developed frameworks for classifying and understanding service strategies. Other papers have been more introspective and concerned with the nature of the subject itself, Chase and Kellogg (1990) for example, reviewed the state of service management knowledge, Grönroos (1990a) addressed the meaning and nature of service management, Martin and Horne (1992) made proposals about the applicability of "service" in manufacturing situations. Other papers have been concerned with how operations managers should enquire

into their subject (see for example Meredith et al 1989, Flynn et al 1990, Meredith and Amoaka-Gyampah 1990).

Applied research, on the other hand, is conducted when a decision must be made about a specific real life problem Gummesson (1991). Again many examples exist in the service literature. Haywood-Farmer and Stuart (1988) worked with professional services. Shostack (1977, 1984, 1987) and Howcroft (1992) specialise in the banking industry. Edvardsson has worked with several organisations including management consultancies (1990) and airlines (1992). Fitzgerald et al (1991) considered a range of UK-based service industries.

The testing question for whether a piece of research should be applied or basic concerns the objective of the research. Is it primarily analyst or catalyst in nature (Gummesson 1991)?

The prime objective of this research is to expand scientific knowledge as there is a belief that the hypotheses being tested may be far reaching and have applications in a broad range of situations. There is also an implicit real life problem: how can service operations improve the quality of service provided to customers? However, the prime intention of this research is not to deal with the implementation of theories or concepts but the development of scientific knowledge.

Its prime aim, therefore, is basic research. Its purpose is to understand how operations can master the provision of good service by improving upon our understanding of the creation of satisfaction in the minds of customers by the development of theories. Theories as Popper (1980) explained are "the nets cast to catch what we call 'the world'; to rationalize, to explain and to master it. We endeavour to make the mesh ever finer and finer".

2) Empirical or mathematical modelling

The second macro question is should the research be empirically-based or concerned with mathematical modelling? This question has been answered by the chosen research paradigm. It should be empirical, using knowledge based on real world observations using data gathered from naturally occurring situations, rather than via laboratory or simulation studies (Flynn et al 1990).

The purpose of empirical data is theory building and verification (Flynn et al 1990). This is supported by Yin (1989) who argued that stronger theory will result if the methodology has been grounded in data rather than if the origin of the theory is of little concern. He argued that data should be used to build theories, not only verify them. Whereas the use of empirical data is reasonably well established in the manufacturing arena (see for example Ferdows et al 1986) it is only now

coming to the fore in the evolution of service operations management (see for example Parasuraman et al 1985 and Roth and Van Der Velde 1987). Walker (1990) supported the need for more empirical research in services. He said "The tendency in the past has been to concentrate on product-related research, but not to analyse how the customer feels about doing business with you".

The purpose of this research is to help managers understand how they can improve service quality performance based on empirically testable hypotheses. Its concern therefore, is with the analysis of empirical data rather than mathematical modelling.

However, the choice of this approach creates two main problems. First, there is a need to use, and access, real world data and thus the research may be constrained by what is available. This question will be dealt with in a later section on research design. The second and more important question at this stage is the implicit assumption that the object of the study, satisfaction, can be observed and measured (Morgan and Smircich 1980) and that the phenomenon in the study can be isolated from the context in which it occurs.

This is an underlying assumption of the logical positivist/empiricist research paradigm. Given that satisfaction is not context free and is open to

interpretation, empirical research, using the logical positivist/empiricist research paradigm, whilst taking a more sceptical approach than the axiomatic, does not try to understand the complexity of the relationships.

This is an inherent weakness in the proposed approach, as satisfaction is not context free. Satisfaction, as described by the disconfirmation theory, is the result of a very complex set of relationships between a number of factors. These factors include pre-performance standards, the service experience and the service outcome. The pre-performance comparison standards are a function of personal attitudes, needs, expectations, beliefs about the experience, knowledge from previous experiences and information from other people who have experienced the service before and the marketing efforts and image of the organisation in question (see for example Berry et al 1985, Woodruff et al 1985, Tse and Wilton 1986, Engel et al 1993). The perception of the service is a function of the service experience, which can involve many separate and sequential moments of truth (see for example Shostack 1984 and 1987, Johnston 1987, Parasuraman et al 1988, Cooper et al 1989, Bolton and Drew 1991, Cronin and Taylor 1992, Swan 1992). And, the service outcome, which is either a cognitive response or an emotional state (Hunt 1977, Oliver 1980 and 1982, Day 1984, Mattsson 1991), leads to a post-decision construct

(LaTour and Peat 1979) which will affect future behaviour and attitudes (Hausknecht 1988).

The complexity is, to some extent, captured in the synthesized dynamic model of service quality developed in chapter six. To try to unravel this complexity a more existential paradigm is required. The aim, however, of this piece of research is to contribute to the debate by trying to isolate a small but significant part of it; the key determinants of satisfaction and dissatisfaction. It is hoped that this might then allow more progress to be made using a more complex and dynamic interpretative approach.

It is therefore suggested that a decision to restrict this research to isolate satisfaction from its context is both pragmatic and sensible given the complexity of this field and the current state of knowledge. The isolation of satisfaction in this way is recognised as a key assumption, and an inherent weakness, of this research.

3) Qualitative or quantitative

Much operations management research has been quantitative in nature, particularly in the production field and in the United States. Some non-USA service oriented examples of quantitative-based research would include

Barrett (1990), Baden-Fuller and Bateson (1990),
Vandermerwe and Gilbert (1991) and Smith et al (1992).

This appears also to have been the case in much consumer research as Miller (1970) observed "It has become fashionable to ornament science with statistical embellishments. No equation is complete without at least a double summation sign somewhere in it, sub-ij's attach themselves to familiar X's, Y's and Z's; and phrases like 'polymodal distribution', 'inverse reciprocal correlation', and 'multivariate deviations'".

Just as Meredith et al (1989) and Flynn et al (1990) have criticised what they see as an over-reliance on quantitative methodologies, Jacoby (1978) too criticised consumer behaviour researchers for their "mindless number crunching without concern for relevance".

It has been argued that qualitative methodology provides powerful tools for research in management and business administration (see for example Argyris et al 1985 and Gummesson 1991). Qualitative methodologies have been predominant in sociology, psychology, education and anthropology/ethnography (see for example Taylor and Bogdan 1984) but have only recently started to become acceptable in management and in particular operations management research where the allegedly "more scientific" approach has predominated (Gummesson 1991).

The critical point in the choice of methodology, raised by Gummesson, is that the research methods used should be appropriate to what is being studied. Satisfaction is a cognitive or emotional response to a situation (see for example Mattsson 1991, Oliver 1982), as such it is concerned with people's feelings and attitudes which might be difficult to capture in terms of algebraic relationships. This might be the outcome of a more axiomatic approach rather than the logical positivist/empiricist paradigm that will underpin this research.

It is proposed that a primarily qualitative approach is appropriate to this embryonic research into the causes of satisfaction, dissatisfaction and recovery. This would involve the identification, classification and evaluation of the reasons for certain types of satisfaction outcomes from service situations. However, some quantitative research may be possible, certainly in terms of the frequency of occurrence of causes by classification.

RESEARCH METHODS

The nature of satisfaction and the objectives of this research would suggest that it accords with the logical positivist/empiricist paradigm using customers' perception of reality. It is concerned with the

development of theory (pure research) though its subject is of concern to practitioners. It will use empirical data and employ a predominantly qualitative approach to the analysis of data.

Appropriate research methods would therefore include case studies, interviewing, and surveys (see for example Yin 1984, Meredith et al 1989, Gummesson 1991). The following sections evaluate each of these possible approaches.

1) Case studies

Despite a stereotype of lack of precision, objectivity and rigour, case studies are extensively used in social science research (Yin 1984). The purpose of case study based research is to obtain information from one, or a small number of situations and in particular to try to obtain answers to the questions "why" and "how" (Yin 1984). The main advantage of using cases is that they afford the researcher the opportunity to study a few organisations in some depth (Zikmund, 1991). They also provide a great deal of content and context for the issue under investigation and are useful for studying processes. The main disadvantage is that they lack statistical validity usually because the studies are too time consuming to repeat in sufficient number to draw generalisable conclusions (Gummesson 1991). They are

also open to the influence of the researcher who may have difficulty in being a less than impartial observer and data collector in an organisation. It is difficult not to influence events and management thinking when asking questions (Miller 1970).

Given that the focus of this research is to understand and identify the customer-based determinants of satisfaction and dissatisfaction, it does not seem appropriate to look in depth at a small number of organisations to gain an understanding of the context of the satisfaction experience. The logical positivist/empiricist research paradigm chosen requires that the object of the study has to be isolated from the context in which it occurs.

The case based approach may be a more appropriate research method to employ at a future stage in this research, when it might move to a more interpretive paradigm and thus require more contextual data.

2) Interviews

Interviews fit comfortably with the chosen research paradigm. They too help provide answers to the questions "how" and "why" (Yin 1984). There are many possible types of interviews which can be described using many dimensions including:-

- * the number of people involved (from one to many, focus groups being an example of the latter)
- * the degree of structure (highly structured to unstructured)
- * the nature of the data (the spoken word and/or observed behaviour)
- * the amount of flexibility in the interview (in-depth probing to rigid adherence to the set questions)
- * the role of the interviewer (investigator or data recorder)

The main advantages of interviews is that they can enable the researcher to clear up any inaccuracies or inconsistencies and they can help generate a deeper understanding of the object of the study (Krueger 1988, Zikmund, 1991). Interviews allow a sample frame to be chosen to reflect the nature of the population in question. There is also likely to be a high percentage of "returns". They also allow interviewees to express their feelings and the reasons for them in their own words (Krueger 1988).

There are several disadvantages. The role of the interviewer, for example, is paramount and difficult. Probing interviews require a highly skilled interviewer to encourage discussion without influencing the outcome. The respondent may be influenced by the tone of voice or gestures of the interviewer (Zikmund, 1991). Furthermore the numbers of interviews possible will be, though greater than case studies, less than postal surveys, for example. Interviews may thus be time consuming and costly (Miller 1970). Furthermore respondents are not anonymous and may be reluctant to provide information (Zikmund, 1991).

This research is concerned with trying to generate theories about the causes of satisfaction, dissatisfaction and recovery. Given the need to be able to create generalisable conclusions, as large a sample as possible is required. Interviews, though allowing some probing of the situation, might be too time consuming. This, however, might be an appropriate approach to supplement any chosen method to clear up any inconsistencies or problems in the data.

3) Surveys

Surveys are the most commonly used method to collect data, using a sample to represent a larger population (Zikmund 1991). Their main advantages are that they are

quick and inexpensive, and, if well designed can be a good means of assessing information about a population. They permit wider coverage than cases and interviews and may allow more time for the respondent to consider his or her answer. They also lessen interviewer effect. The disadvantages are that surveys are a popular tool and there may be customer resistance to their use (Zikmund 1991). Furthermore the respondent may examine the purpose of the study, the questionnaire's clarity and its utility before completing or discarding it (Miller 1970). Also respondents may differ from non-respondents, it is very difficult to check the difference. Furthermore surveys do not usually allow for a follow-up discussion to clear up any inconsistencies or misunderstandings or to amplify customers' feelings about the reasons for the responses. There is also a need to ensure that the information is useful and generalisable through appropriate survey design.

The use of surveys would seem to be an appropriate method for this research for two main reasons. First, surveys accord with the positivist/empiricist paradigm and allow for the isolation of the object of the study from its context. Second, they would allow a large enough sample to be taken to create generalised conclusions without undue interference from the researcher.

A comparison of the main differences between case, interview and survey methods is contained in table 7.1.

	CASES	INTERVIEWS	SURVEYS
COVERAGE	one, or few	many	large numbers
REPRESENTATIVE SAMPLE	unlikely	possible	possible
GENERALISATION	difficult	possible	possible
DEPTH OF UNDERSTANDING	great	some	little
CONTEXT PROVIDED	great	some	none
TIME REQUIRED	time consuming	time consuming	quick
INFLUENCE OF RESEARCHER	some	some	little
POSSIBILITY OF FOLLOW-UPS	possible	possible	difficult

Table 7.1 A comparison of the main differences between case, interview and survey methods

Although all of the methods have their advantages and disadvantages, the two key issues that guide this research toward the use of surveys is the opportunity to use a reasonably large sample size and the limited amount of time and cost involved.

There are many types of surveys. The two main ones that have been employed in service quality and satisfaction

research are scale item questionnaires and the critical incident technique.

1) Scale item questionnaires

Scale item questionnaires, for example SERVQUAL, provide the respondent with a tick list of categories to check. As such they can be quick and easy for the respondent. Their main disadvantage is that they limit the respondent to a particular set of responses which he or she may not feel are suitable or appropriate for the situation. The detractors of SERVQUAL, in particular, have argued that the criteria do not hold in all situations and, further, that customers tend to mark middle to high values (see for example Carman 1990, Haller 1991, Finn and Lamb 1991, Andersson 1991, Cronin and Taylor 1992, McDougall and Levesque 1992, Taylor et al 1992).

Mattsson (1992b) criticised many service quality researchers for using traditional attitude scales (like SERVQUAL) and suggested that methods are needed to capture service process qualities. Cadotte et al (1987) further argued that using a Likert scale with judgemental words at either end, for example good, bad, fast slow, friendly, unfriendly, implies a standard which may influence customers away from their own expectations and standards. They suggested that a scale is required that measures true beliefs rather than evaluations.

As far as this research is concerned, a more important problem for scale item questionnaires, and SERVQUAL in particular, is that they do not allow for easy identification of satisfiers, dissatisfiers and recovery factors. They would limit respondents' choice to those factors on the questionnaire.

A survey technique which allows customers to identify satisfactory and dissatisfying service situations and express their reasons in their own words is the critical incident technique.

2) Critical incident technique (CIT)

The critical incident technique is a simple technique. As applied relatively recently in service activities it involves asking customers to provide descriptions of a time when they were highly satisfied with a service situation and a time when they were highly dissatisfied with a service situation.

The technique was developed during the second world war by psychologist John Flanagan and was used to determine the reasons for the high rate of pilot failure during training. The analysis of his tests provided the basis for selection tests that achieved a substantial reduction in failure rate. Flanagan (1954) defined CIT as

"essentially a procedure for gathering certain important facts concerning behaviour in defined situations". This approach has been developed recently, influenced by the work of Herzberg et al (1959), to identify satisfiers and dissatisfiers in product purchasing (see for example Swan and Combs 1976, Maddox 1981, Hausknecht 1988). By the mid 1970s over 250 studies utilising CIT had been published (Farber and Fox 1992) and the technique had developed a history and solid reputation (Swan and Combs 1976).

In the last few years the critical incident technique has been applied to some exploratory studies in service quality through the analysis of customers' stories of good and bad experiences in service organisations (see for example Bitner et al 1990, Mersha and Adlakha 1992, Edvardsson 1992).

Critical incidents

Although a "critical incident" as originally used by Flanagan *implied* that the incidents were potential or actual *problem* situations, Flanagan defined critical incidents as situations where "the consequences are sufficiently definite to leave little doubt concerning their effects". Some studies have been concerned, as was Flanagan's, with potential failure or problem situations. Edvardsson (1992) for example, was concerned with

investigating "negative" critical incidents in problems and failures encountered by business airline passengers and staff. Other studies have looked at both positive and negative outcomes in both product and service situations (see for example Swan and Combs 1976, Maddox 1981, Hausknecht 1988, Cadotte and Turgeon 1988, Bitner et al 1990, Smith et al 1992, Mersha and Adlakha 1992).

In summary, critical incidents are events that contribute to, or detract from, the perceived service in a significant way. For an incident to be defined as critical it must deviate significantly, either positively or negatively, from what is normal or expected (Edvardsson 1992, Farber and Fox 1992, Stauss 1993). This corresponds to the disconfirmation model which has two "exceptional" outcomes, positive and negative disconfirmation. Confirmation, on the other hand, is the outcome of "normal" service; an outcome as expected (Edvardsson 1992).

Critical incident technique

The critical incident technique has been used in service research in interview form (see for example Edvardsson 1992) or in survey form (see for example Bitner et al 1990, Smith et al 1992, Mersha and Adlakha 1992).

In such studies customers have been asked to provide descriptions, ie anecdotes, of a time when they were highly satisfied with a service situation and a time when they were highly dissatisfied with a service situation. (One exception is Edvardsson who only studied negative incidents, dissatisfying experiences.) Edvardsson (1992) quoted an article in Swedish by Andersson and Nilsson which describes the procedure: "Individual interviews should be conducted on the basis of previously determined models the interviewer asks about incidents when especially efficient/inefficient behaviour has been observed ... Naturally, there is no general form for collecting critical incidents. Interview questionnaires must be devised for each particular survey in accordance with the precondition and aim".

Bitner et al (1985) instructed their respondents simply to think of a situation and describe it so the interviewer could visualise it.

Advantages

This technique is quite unlike scale item questionnaires which measure perceptions against predetermined factors. It allows customers to express their own views without prejudice. Also it does not employ the frequently used "grade on a scale of 1 to 10", or "grade good, average or poor", where "9" or "good" is difficult for customers to

understand and the results tenuous and often unhelpful (Booms 1990).

Furthermore, the critical incident technique not only provides a measure of service quality success but also an understanding of quality from a customer's point of view. As such it takes a customer's perception of service quality.

The CIT is close to getting towards direct observation without the hardships of observation (Gummesson 1991). The data provided may thus be quite rich - "a level of detail and richness that puts the researcher close to the realities of the process being studied. It is almost direct observation" (Bitner et al 1985).

As the technique collects the interpretation of events by customers in their own words, the anecdotes can provide information for managers as to how they might improve service quality. This is important from an application perspective in that it can provide managers with some ideas about what they could do, as well as identifying the characteristics of good and bad service. As Booms (1990) stated "Asking customers for favourable and unfavourable service stories gives companies a clear picture of what is on people's minds (It) is a process that will give managers concrete ideas about

customer expectations that can more easily be brought to life for front-liners."

Disadvantages

The main disadvantage of CIT is that it does not allow for a neutral option, a don't know or never thought about it (Hausknecht 1988). The CIT seeks only the extremes. Given the concept of satisfaction as a continuum with two thresholds (see for example Miller 1977, Oliver 1980, Woodruff et al 1985, Swan 1988, Kennedy and Thirkell 1988), CIT will be unable to identify the middle ground factors that create a feeling of adequacy in the zone of tolerance. CIT will only explore the conscious "-" and "+" states.

Another problem is that the incidents may have taken place some time before the collection of the data and the incidents may have been re-interpreted since, maybe in the light of some further event.

The CIT also requires customers to take more time and effort in providing information for the research. They are not as simple as ticking boxes or identifying places on scales as in scale item questionnaires.

One of the key difficulties in using CIT is not the collection of the data themselves, but their

interpretation and classification (Flanagan 1954). As Booms (1990) explained it is not a "whiz-bang, stick-it-in-the-computer-and-read-the-results process. It is not refined statistically". This is a point supported by Stauss (1993) who suggested that the processing and analysis of CIT data is more complex than questionnaires, but about the same as interviews, due to messiness of material. Edvardsson (1992) suggested that "it is not a good idea to use a previously established set of categories for classifying critical incidents", though he does make the point that how the incidents are classified should be determined by the purpose of the research.

It must also be recognised that the more recent applications of the CIT are based upon Herzberg et al's (1959) work which itself has been the subject of some criticism (see for example Bobbitt and Behling 1972, House and Wigdor 1968, Vroom 1964, Kelly 1969). In particular there is some dispute that their hygiene and motivating factors are the obverse of each other and not on a continuum as Herzberg claimed. Furthermore, as was acknowledged by Herzberg, there is not a clear and distinct difference between the employee satisfaction and dissatisfaction factors, rather there is a tendency for the factors to separate one way or another.

A significant problem for this piece of work is that the CIT has not been used before to identify recovery situations.

The main differences between scale item questionnaires and the CIT are summarised in table 7.2.

	SCALE ITEM QUESTIONNAIRES	CRITICAL INCIDENT TECHNIQUE
SCALE	attitude scale	customers' judgement
RANGE	full scale	extremes only
FACTORS	pre-determined	open
RUBRIC	researcher's	respondent's
RESPONSE REQUIRED	ticks	anecdotes
EASE OF RESPONSE	relatively easy	requires time and effort
DEPTH OF UNDERSTANDING	little	more
USE IN RECOVERY	possible	not done before

Table 7.2 The main differences between scale item questionnaires and the CIT

It is proposed that the CIT approach be used for this piece of research because it meets with the objective of this research in that it captures a part of the process (Edvardsson 1992) and allows investigation and understanding of situations which result in outcomes

outside the zone of tolerance; satisfaction and dissatisfaction. It also accords with the chosen research paradigm, logical positivist/empiricist which assumes that satisfaction or dissatisfaction can be isolated from the context in which it occurs. CIT also assumes a phenomenological perspective which sees the customer's view of reality, capturing incidents using customers' own words which provide detailed and rich descriptions of their experiences. Indeed, Peters (1986) claimed that if one accepts that customer perception is all then it is customers' perceptions that need to be understood, that is quality or satisfaction from a customer's point of view. CIT does this without prejudice. An evaluation of customers' language will provide an opportunity to construe how we believe others see the world and help understand what actions might be appropriate for decision makers to take in the design, creation and control of a service.

The above discussion of the critical incidence technique has, however, identified several important problems which need to be resolved:-

- 1) No neutral option

The CIT will only identify situations that lead to either negative or positive disconfirmation. This, indeed, is the objective of the study. However, this does raise the

question that there may be some quality factors that result in an outcome in the zone of tolerance. Given that this is an "unconscious state", it will be exceedingly difficult to identify explicitly any such factors. However, the hypotheses, by implication, suggest that all the factors may lead to indifference, it is only when a certain factor is above or below a certain threshold that it becomes satisfying or dissatisfying.

2) Time since the event

It is possible that the incidents may have been re-interpreted since they were experienced, maybe in the light of some further event. This problem is recognised but cannot be avoided. However, given that it is the customer's perception of reality that is being sought, the research is not looking for a "true" interpretation but how it was interpreted by the customer.

3) Effort to complete by customer

Given that CIT surveys are more time consuming and more difficult to complete for customers than scale item questionnaires, the research design must take account of a likely low response rate.

4) The interpretation of data

One of the major problems associated with CIT is the interpretation and classification of the data. In this situation there exist 17 empirically derived quality factors, each with its detailed explanation, which accord with the frequently used, though less specific, SERVQUAL dimensions. It is therefore proposed to use these categories as a means of initially classifying the data, though an open mind is required as there is no evidence to allow one to conclude that the 17 factors are comprehensive.

5) The difference between satisfaction and dissatisfaction

The use of the 17 factors will help differentiate between the causes of satisfaction and dissatisfaction. All the factors are different and no one factor is the obverse of another, ie there is only one category for friendliness, an unfriendliness category does not exist. Friendliness may satisfy and a lack of friendliness may dissatisfy, both of which can be recorded, thus any obverses will be apparent.

6) Recovery

The CIT has not been used for recovery situations before. This is a major concern. Satisfaction results either from positive disconfirmation, or, from a recovered negative disconfirmation experience. Given that the CIT asks customers to explain the situation, it is hoped that it will be possible to separate the satisfaction anecdotes into those which were recovered failures and those that were positive disconfirmation examples.

Pilot study

Given that there is some doubt and uncertainty over the CIT, particularly in terms of the applicability of the 17 factors, the identification of recovery situations and a possible low response rate, it is proposed that a pilot study be undertaken. This will allow a preliminary test of the hypotheses in order to provide a greater understanding of the causes of satisfaction, dissatisfaction and recovery. A second objective of the pilot study is to ascertain if the CIT and method of analysis is appropriate to take forward into the main study.

In particular the pilot study aims to:-

- 1) ascertain if the responses from the CIT survey would provide enough data to enable the identification of quality factors
- 2) check the applicability and adequacy of Johnston and Silvestro's (1990) 17 quality factors
- 3) ascertain if it is possible to identify recovery situations
- 4) try to identify the sample size that might be required for the main study

The next section considers the detailed research design and method for analysing the data.

RESEARCH DESIGN

It is proposed that a pilot study, followed by a main study be undertaken using the critical incident technique. The purpose of both studies is to collect data on satisfying and dissatisfying situations, in the customer's own words, in order to test the hypotheses described in chapter six. The additional purpose of the pilot study is to answer the points made in the previous section, so that the research design can be reviewed and either revised or revoked as necessary before the main study.

There is no one best research design for all situations indeed Simon (1969) stated "There is never a single standard, correct method of carrying out a piece of research ... It is more like a recipe for beef Stroganoff; there is no one best recipe". However there are some key questions that need to be addressed to ensure that the design chosen is as good as possible. There are three major criteria for evaluating research designs; reliability, validity and sensitivity (Zikmund 1991). Given that CIT is a survey, it is necessary also to address survey errors, in particular the need to minimise sampling errors.

Reliability

Reliability is the degree to which the measures used are free from error and will therefore yield consistent results. Reliability will be attained if the outcome of the data collection process is repeated when reproduced. Reliability also questions the internal consistency of the instrument and would suggest that the questions are rearranged to check for internal consistency.

The need to produce consistent results raises an important question. The hypotheses imply that the satisfying, dissatisfying, hygiene, enhancing recovery factors will be the same in all service situations. One

factor that might create error here, and at the same time limit the generalisability of the conclusions, is that the factors could be different in different service situations. If this assumption does not hold then the results will be invalid. Although it is assumed that the factors will be the same for all organisations, it is suggested that a fifth objective of the pilot study should be to try to gauge the effect of a multi-organisational sample on the results. It should then lead to a recommendation as to whether the main study should be multi-organisational or based on a single organisation.

The splitting of the study into two, the pilot and the main study, also allows for multiple administration which will also test for reliability. Further it is proposed that the main study comprise not a single sample, but several, so that between sample reliability can be checked.

To create internal consistency it is proposed that the questions be reversed in half of the questionnaires.

Validity

Validity is concerned that the instrument measures what it is intended to measure. There are three types of validity. Face (or content) validity is concerned that

there is professional agreement that the scale appears to accurately measure what it is intended to measure and also that the questions are clear and understandable. Criterion validity is concerned that the measure correlates with other measures of the same construct. Construct validity presupposes its ability to confirm the related hypotheses.

The critical incident technique could be considered to have content validity as it has been used for this purpose before, though a question remains over its use in recovery situations. It is hoped that the pilot study will provide an answer to this.

The CIT also has criterion validity as it accords with the current views on the nature of satisfaction and dissatisfaction, stemming from the disconfirmation paradigm.

The CIT has construct validity as it relates to the hypotheses, though it has not been used to identify recovery factors before. It is hoped that the anecdotes contained in the responses will be sufficient to identify recovery experiences. This will be an important test in the pilot study.

Sensitivity

Sensitivity refers to the instrument's ability to accurately measure variability in stimuli or responses. Given that the instrument considers the extremes of satisfaction and dissatisfaction, which are extremes at either side of the zone of tolerance, it could be considered to be sensitive.

Sampling errors

There is also the need to remove or at least reduce sampling errors which are errors resulting from non representative samples. This can be reduced by the careful selection of the sample frame and the sample size.

To try to ensure an appropriate sample frame it is proposed that the questionnaire include a question requesting some demographic details including sex, age and level of education received to facilitate the identification of any social bias in the sample population. The pilot study data will also be analysed to identify the industry types referred to in the responses to identify any sector bias in the sample.

Given that some questions exist about the suitability of the CIT instrument for this study it is proposed that, in

order to generate a high response rate as speedily and as easily as possible, the pilot study will use a convenience sample. Several types of convenience sample could be used. Most of the previous exploratory studies have used MBA or undergraduate students (see for example Swan and Combs 1976, Maddox 1981, Hausknecht 1988, Mersha and Adlakha 1992 and Smith et al 1992). Given the timing of this research, which does not coincide with the researcher's MBA class, it is proposed to approach personal contacts who will be asked to approach their personal contacts to complete the questionnaires. This will have the advantages of speed and a likely high response rate, and, should also provide a wider demographic coverage than might be achieved from a class of students. The demographic questions in the CIT instrument will allow for an assessment of the biases in the convenience sample.

To reduce sampling error in the main study it is proposed that:-

- a) if a multi-organisational sample is used, that it be systematically selected to ensure coverage responding to the size (as represented by GDP) of the various industries within the service sector.

or

- b) if a single organisation sample is used then a stratified random sample be used to ensure broad coverage of that industry.

To generate as many responses as possible to try to improve the ability to generalise from the findings, it is proposed to use the CIT in questionnaire form rather than interview form. It is proposed that the pilot study should aim for over 100 respondents. The size of the main study will be determined by the results of the pilot study.

1) Pilot study

This will be a preliminary step to help ensure a more rigorous and more conclusive major study.

The objective

There is now an additional objective for the pilot study, to resolve whether the main study should be multi-organisational or based on a single organisation. Adding this to the objectives proposed earlier, the complete set of objectives is now to:-

- a) provide a greater understanding of the causes of satisfaction and dissatisfaction in order to undertake a preliminary test of the hypotheses and

b) evaluate the research design in preparation for the main study. In particular:-

- to ascertain if the responses for the CIT survey would provide enough data to enable the identification of quality factors
- to check the applicability and adequacy of Johnston and Silvestro's (1990) 17 quality factors
- to ascertain if it is possible to identify recovery situations
- to try to identify the sample size that might be required for the main study
- to resolve whether the main study should be multi-organisational or based on a single organisation.

The instrument

Based on Herzberg et al's questionnaire and that used in more recent service quality studies by, for example, Smith et al (1992), it is suggested that the questionnaire comprise two questions. The first question

asks customers to think of a time when they felt very pleased and satisfied with the service received and to describe the service situation and why they felt so happy. The second question requires customers to think of a time when they were unhappy and dissatisfied with the service they received and to ask them to describe, in a few sentences why they felt this way.

The questionnaire will also include a question requesting some demographic details including sex, age and level of education.

The sample

A convenience sample of 200 people will be used to try to generate over 100 responses.

Method of analysis

It is proposed that a method similar to that used by Herzberg et al (1959) be employed to analyse the questionnaires:-

- a) Each anecdote will be numbered and then summarised into a list of key words and phrases which encapsulate the customer's experience of service. This will then be recorded onto an index card.

- b) Three sets of cards will be created one for the anecdotes relating experience of good service (the satisfiers), one for the anecdotes of poor service (the dissatisfiers) and one for the recovery anecdotes.
- c) The cards will be checked to see whether similar key words and phrases could be aggregated as single factors or whether there are several factors contained in one experience.
- d) The factors will then be grouped according to the 17 quality factors identified by Johnston and Silvestro (1990). Any anecdotes which do not fit into the classification will be treated separately and if necessary further quality factors will be proposed. Since the number of each anecdote will be recorded on the index cards it will be possible to refer back to the original anecdote to try to interpret the customer's intended meaning.
- e) Once the quality factors have been identified for each classification, the analysis of the similarities and differences can take place. It is proposed simply to analyse the frequency of use of the different factors in each category. It may also be possible to use some non-parametric tests to obtain some statistical assessment of the results

and to check the reliability of the data between the different samples of the main study.

Outcomes

It is hoped that the pilot study will allow for a preliminary discussion on the existence of satisfaction, dissatisfaction, hygiene, enhancing and recovery factors. It is also hoped that it will answer some of the unresolved issues regarding the application of the CIT to the objectives of this study. In particular, decisions will need to be taken concerning whether the instrument is suitable in this situation, whether the main study should be multi-organisational, and provide some indication of appropriate sample size.

2) Main study

The precise detail of the main study will depend upon the result of the pilot study. However, at this stage the following points can be made.

Objective

The purpose of the main study is to try to conclusively state whether there are quality factors which satisfy, dissatisfy or enable recovery to take place.

Instrument

At this stage, it is proposed to use the CIT instrument as used in the pilot study.

Sample

At this stage it is assumed that a multi-organisational sample can be used. If so, it will be systematically selected to ensure coverage responding to the size (as represented by GDP) of the various industries within the service sector.

If the pilot study finds only limited support for the hypotheses and that the multiple organisational nature of the sample might be a causal factor, the main study will then consider applying CIT to a single service organisation, using a stratified random sample ensuring broad coverage of that organisation.

It is suggested that if the study has to limit itself to a single organisation then the appropriate criteria for choosing such an organisation might be as follows:-

- * willing and able organisation

The organisation should be willing and able to be involved and provide access to its customers.

* identifiable and willing customers

An organisation whose customers are identifiable and have direct contact with the organisation is required. It would not be appropriate to select for example, the army. Its customers are difficult to identify, may be remote and where not they may be hostile. An organisation needs to be chosen whose customers are also likely to be willingly involved.

* non-emotive

It would be sensible to choose a non-emotive organisation to minimise the amount of prejudice about that organisation in the minds of customers. British Rail, for example, would not be satisfactory as many customers, whilst maybe having satisfactory service experiences, may reflect the anti-BR culture.

* a norm of tolerance

It would be appropriate to select an organisation whose expected outcome would be within the zone of tolerance, where adequacy is the norm so that the extremes of both satisfaction and dissatisfaction will appear to be different from the norm. A leisure park, for example, would not fit this criterion as its customers may expect

always to be "delighted", that is to be very satisfied by their experience. Anything less might be considered unsatisfactory.

* satisfaction and dissatisfaction do occur

Although a norm of tolerance is required, it would not be appropriate to choose an organisation that always provides service within this zone. There must be some evidence that there are situations that both satisfy and dissatisfy in the chosen organisation.

* multi-site organisation

In order to make the results as generalisable as possible it would not be appropriate to choose a single-sited, unique organisation where the results may be seen to be only appropriate to that one outlet.

Examples of the types of organisations that might fit the criteria would include a nationwide estate agency, a high street bank or building society, a major retailer or an hotel chain. However, the decision about the precise choice of organisations will be left until if and when it is necessary.

Method of analysis

At this stage it is proposed to follow the same method as outlined in the pilot study.

Outcome

The outcome will be to conclude whether there are particular quality factors that satisfy, dissatisfy or enable recovery to take place, for service organisations in general, or one service organisation in particular.

SUMMARY

This chapter has identified and evaluated an appropriate methodology for this research. It has proposed that the critical incident technique be employed to try to identify the causes of satisfaction, dissatisfaction and recovery in service situations. This approach is based upon a logical positivist/empiricist paradigm. Its data source will be the customers' perceptions of reality as it will collect customers' anecdotes describing, in their own words, their service experiences. This somewhat breaks away from the traditional mould of operations management research, much of which has been based upon the axiomatic approach using an artificial construction of reality.

The study will be conducted in two phases. Phase one will be a pilot study whose purpose is to provide a greater understanding of the causes of satisfaction and dissatisfaction in order to undertake a preliminary test of the hypotheses, and, to evaluate the research design in preparation for the main study. The purpose of the main study is to try to conclusively state whether there are quality factors which satisfy, dissatisfy or enable recovery to take place.

The following chapters report on the pilot study and the main study.

Chapter 8

PILOT STUDY

SUMMARY

The objective of this pilot study was to undertake a preliminary test of the hypotheses involving an investigation into the causes of satisfaction, dissatisfaction and recovery. Its purpose was also to ascertain if the critical incident technique and the method of analysis were applicable and appropriate for use in the main study.

The results of the pilot study provided support for hypotheses one and two. The quality factors did have very varying effects on satisfaction and dissatisfaction. In many cases the predominant effect was either upon satisfaction or dissatisfaction. Some factors were more difficult to classify due to the small number of references made to them.

Hypothesis three was unsupported. The quality factors did not conclusively separate into enhancing or hygiene factors. It was suggested that this might be due to the mixed industry nature of the sample.

The critical incident technique provided adequately rich descriptions of service situations. This allowed for relatively easy identification of quality factors. The technique also yielded a large number of recovery situations.

It was proposed to increase the sample size for the main study and to investigate a single service industry.

INTRODUCTION

This pilot study has two main purposes. First it aims to undertake a preliminary test of the hypotheses in order to provide a greater understanding of the causes of satisfaction, dissatisfaction and recovery. Second, it aims to determine if the critical incident technique and the proposed method of analysis are appropriate to take forward into the main study.

The first section describes the sample and identifies its biases.

The second section describes the process of classifying the anecdotes and some of the difficulties that were found.

The main section, section three, contains an analysis of the data.

The results of the analysis are discussed in terms of the hypotheses in section four.

THE SAMPLE

The pilot study used a convenience sample as one key purpose of this part of the study was to ascertain, speedily and easily, whether the quality factors could be

determined and categorised into satisfying, dissatisfying and recovery situations. Whilst this will allow for some discussion of the hypotheses it will determine if the instrument and method of analysis of the data are suitable for use in the main study.

Two hundred questionnaires, with an explanatory letter, were issued to personal contacts and other peoples' personal contacts. The questionnaire contained two main questions. The first main question asked customers to think of a time when they felt very pleased and satisfied with the service received and to describe the service situation and why they felt so happy. The second main question required customers to think of a time when they were unhappy and dissatisfied with the service they received and to ask them to describe, in a few sentences why they felt this way. The questions were reversed in half of the questionnaires. The questionnaire also included a question requesting some demographic details including sex, age and level of education. A copy of the questionnaire is attached in appendix 1.

One hundred and twelve questionnaires were returned; a 56 per cent response rate.

Biases

There were clear biases in the profile of respondents in terms of age and level of education.

There were just two respondents under the age of 18. The other categories were fairly evenly distributed with the most number of respondents in the researcher's own age group, see table 8.1. There was a slightly higher proportion of male respondents (52 per cent):

	Male	Female	Total
Under 18	2	0	2
18 - 30	17	17	34
31 - 50	26	22	48
Over 50	13	15	28
Total	<u>58</u>	<u>54</u>	<u>112</u>

Table 8.1 Profile of respondents by age and sex

The majority of respondents were people who had gone into higher education, see table 8.2.

		%
Left school at around 16 years	11	10
Left school at around 18 years	26	23
Went into higher education	75	67
Total	<u>112</u>	

Table 8.2 Profile of respondents by education

The majority of the respondents were professionals. The bias in this sample was partly due to that fact that a higher proportion of professionals were approached. Several respondents commented that the questionnaire had

demanded careful consideration and some felt self-conscious about having to provide anecdotal, descriptive answers rather than simply tick boxes. It may therefore be the case that a lower proportion of the non-professionals initially approached completed their questionnaires. Interestingly Herzberg et al (1959), during their pilot study, found that the more highly skilled professionals were able to provide more detailed anecdotes than the unskilled workers that they interviewed. As a consequence, they decided to restrict their main investigation to interviews exclusively with professionals.

The types of services described was left entirely up to the respondent. As a result a wide range of industry sectors were covered by the respondents. The spread of anecdotes by industry sector is shown in table 8.3.

Table 8.3 also includes the sectors' contribution to service GDP as a guide to each sector's relative size.

	anecdotes no	%	% service GDP *
Distribution, hotels, catering	97	43	23
Transport and communication	25	11	11
Banking, finance, insurance	47	21	28
Public administration	20	9	11
Education and health	31	14	16
Miscellaneous	<u>4</u>	2	11
	<u>224</u>		

* Source - Annual Abstract of Statistics 1993

Table 8.3 Anecdotal data by industry sector

The hotel and catering industry was the source of many of the anecdotes. There were many service industries that were not represented in the sample, for example national defence, theatres, merchant banks and consulting companies. However, comparing the percentage distribution of anecdotes against the percentage service GDP, in table 8.3, it can be seen that, in broad terms, the anecdotes provided widespread coverage of the service sector.

CLASSIFICATION OF ANECDOTES

The richness of the data was surprising. Most respondents described in considerable detail their experiences of the incident in question. Fifty eight per cent of respondents provided anecdotes exceeding 100 words in length and very few anecdotes were under 50 words.

The anecdotes were first classified into quality factors and then into satisfying, dissatisfying and recovery factors.

Classification into quality factors

The results of the process of summarising each anecdote onto an index card and their classification into quality factors provided much support for the 17 quality factors

provided by Johnston and Silvestro (1990). In most cases this was a straightforward, though time consuming, activity. However, three problems arose.

First, many respondents had used the word "helpful" or "helpfulness", particularly in satisfactory experiences. This actual provision of assistance did not fit precisely with any of the categories. The closest definition was contained under attentiveness; "the extent to which the service, particularly contact staff, give the customer the impression of being interested in the customer and show a willingness to serve". The impression of being willing, however, is not quite the same as actually providing help.

As the difficulty is primarily the difference between the "impression" of willingness to serve and the "actual" provision of help, it is proposed to include "helpful" (the actual or apparent provision of help) in the attentiveness category. It is then proposed to amend the title and definition of this category to:-

Attentive/helpfulness

The extent to which the service, particularly contact staff, either provide help to the customer or give the impression of being interested in the customer and show a willingness to serve.

Second, there was an overlap between security and integrity that was highlighted by a difficulty in deciding upon the final classification in a number of cases. Both factor definitions had some concern for confidentiality. Integrity included "the ability to maintain confidence" and security included "the maintenance of confidentiality".

To remove this overlap it was decided to define integrity as being primarily concerned with honesty, justice, fairness and trustworthiness, and security as including breaches of confidentiality specifically. The definitions become:-

Integrity

The honesty, justice, fairness and trustworthiness with which customers are treated by the service organisation.

Security

Personal safety of the customer and his or her possessions while participating in or benefiting from the service process. This includes the maintenance of confidentiality.

Third, six anecdotes did not fit, even closely, with any of the categories. These were cases where the service worker involved had shown some initiative and had changed the service or the product in some way to suit the particular needs of the customer. For example, one service worker suggested the creation of a dressing table from two sets of drawers and made a top to fit as dressing tables were not sold. One shop worker rang around nearby stores, another visited other departments within a store, to check for the availability of a product. In one case a bus driver went off his route to deliver a passenger who had mixed up the destinations.

These are examples beyond attentiveness (the actual or apparent willingness to serve), or the availability of goods and services, or responsiveness (the prompt response to a request for service) and indeed beyond competence and commitment (the carrying out of correct procedures and the expertise and professionalism with which they are carried out). These were situations where the service worker demonstrated some flexibility in responding to the customer's needs which were beyond the routine service provided by the organisation.

To deal with these situations it is proposed that an eighteenth category be added:-

Flexibility

A willingness and ability on the part of the service worker to amend or alter the nature of the service or product to meet the needs of the customer.

This flexibility on the part of the service worker is not new to the literature but it has not been suggested as a service quality factor until now. The concept of the customisation of a service for an individual customer has been used as a key dimension in classifying services (see for example Chase 1978, Maister and Lovelock 1982, Maister 1983, Johnston and Morris 1985). The idea of flexibility as a strategy has also been discussed in the manufacturing literature (see for example Slack 1983 and 1987) and more recently in the service literature (see for example Fitzgerald et al 1991). Fitzgerald et al, for example, proposed three different types of flexibility, one, specification flexibility, or customisation, was identified as being a key dimension for professional service businesses.

Flexibility has been identified here as a factor which has provided very satisfactory experiences to some customers, and therefore needs to be recognised as a quality factor.

A full list of the factors and their revised definitions can be found in appendix 2.

Classification into satisfying, dissatisfying and recovery factors

The classification of anecdotes into satisfying and dissatisfying experiences was done by the respondent. Indeed, all of the anecdotes did give examples of either satisfying and dissatisfying experiences and these were correctly categorised. Whereas all the dissatisfying experiences related to some form of failure, a problem was found, however, in the satisfaction anecdotes where a failure had taken place leading to recovery. The question was, what situations should be classified as failures. Twelve anecdotes provided examples of what was expected here. Two such examples include the situation when an airline had an administrative "foul-up" resulting in a passenger losing her seat, and a doctor's surgery that was running very late. Both of these situations were recovered by the service staff and resulted in the customer feeling very satisfied. There were several other "failures", in particular equipment or goods failures, for example a broken CD player, a blown out exhaust and a crashed computer disk. All these equipment failures were dealt with by the organisation in such a way as to leave the customer very satisfied. Another set of "failures" was not about equipment but the person him

or herself, where some part of their body had "failed". For example, one person lost a crown on a tooth just before a wedding, several others were undergoing surgical treatment including the removal of an appendix, the treatment of broken legs and a number of unspecified medical problems. Other "failures" were situations where the customer had made a mistake or had created a problem; one customer needed to change her ferry tickets at the last moment, one person forgot to take her purse shopping yet still came away with the goods, another left her purse in a shop.

All of these situations describe something that went wrong, but not always with the service itself. Some are associated with the product and others with the customer. Whilst there was a recovery in each case, are these examples of "failure"?

The texts and papers do not seem to provide a definition of failure. Hart et al (1990), Brandt and Reffett (1989) and Shostack (1984), for example, discussed approaches to failure whilst not specifically explaining what it is. They did *imply* that failure is organisation-based. Heskett et al (1990) made the point, however, that recovery may need to take place even when the person or organisation doing the recovering was not necessarily responsible for the failure occurring.

In service organisations in which customers are processed, it is possible that customers make mistakes. As they, and their actions, are an integral part of the service itself, surely managing that failure and recovering from it might be, at least in part, a responsibility of the organisation. (See Johnston 1989 for a discussion of the need to deal with "reject" customers.) Likewise if the customer has had an accident with him or herself or his or her equipment, irrespective of whether it is his or her fault, an accident or the result of previous poor treatment or service, surely the organisation has again, at least in part, a responsibility to put the situation right?

Heskett et al, seemed to support this point as they argued that, irrespective of the cause of the problem or the location of blame, an organisation has the opportunity, if not the necessity, to make a recovery and create a very satisfied customer.

Table 8.4 shows all such failures identified in the sample according to the source of the failure, the organisation, customers' goods or equipment failure, customers' body failure (ie medical), and customers making a mistake.

SOURCE OF FAILURE	no.	%
Organisation	12	20
Customer - goods or equipment	16	27
body	16	27
mistake	15	25
TOTAL	59	

Table 8.4 The sources of failure in the recovery situations

Although the source of each failure could be identified, the responsibility for the failure was more difficult, and in some cases impossible, to ascertain from the anecdotes. In the organisation's case it was usually the organisation's fault. The equipment failure was sometimes the customer's fault for misuse or the organisation's for providing a faulty good. The body failures were sometimes accidents and sometimes the result of previous incorrect treatment.

If one were to accept all these situations as "failures" the situations where recovery took place accounted for 59 out of the 112 satisfaction anecdotes, ie 53 per cent of the very satisfactory experiences were recovered failures.

For the purpose of the factor analysis, all of these situations have been classified as recovered failures.

ANALYSIS

A summary of the results is shown in table 8.5. This table shows the frequency of reference to the 18 quality factors (using the amended categories including flexibility and attentive/helpfulness categories) according to whether they resulted in satisfaction, dissatisfaction and recovery (as explained above).

	SATIS	DISSATIS	RECOVERY	TOTAL
Access	0	2	1	3
Aesthetics	5	1	0	6
Attentive/help	20	11	37	68
Availability	3	20	0	23
Care	18	21	36	75
Cleanliness/tidy	4	4	0	8
Comfort	4	6	2	12
Commitment	16	4	11	31
Communication	9	8	16	33
Competence	6	20	12	38
Courtesy	4	9	6	19
Flexibility	0	0	6	6
Friendliness	14	1	13	28
Functionality	1	20	0	21
Integrity	3	31	1	35
Reliability	8	27	0	35
Responsiveness	11	23	20	54
Security	0	5	0	5
TOTAL	126	213	161	500
N=	53	112	59	224
Av (TOTAL/N)	2.4	1.9	2.7	2.2

Table 8.5 Summary of results

There were exactly 500 references covering all 18 of the quality factors. Most of the references, 213, were dissatisfying. This is not unexpected as the "satisfactory" question in the CIT had to yield both very

satisfactory and recovery situations. The 53 satisfactory and 59 recovery anecdotes yielded 126 and 161 quality factors respectively. Overall, there were 2.2 factors per anecdote. There were more factors found in the satisfactory and recovery situations, 2.2 and 2.7 factors per anecdote compared to 1.9 factors per dissatisfying experience. Although the respondents wrote about the same amount for the satisfying and dissatisfying experiences, they seemed to spend more time describing the nature of, and background to, the problem in the dissatisfying situations rather than what was making them feel dissatisfied.

In table 8.6 the results from table 8.5 have been rearranged by the frequency of referrals.

	S	D	R	TOTAL	CUM %
Care	18	21	36	75	15
Attentive/help	20	11	37	68	29
Responsiveness	11	23	20	54	40
Competence	6	20	12	38	47
Integrity	3	31	1	35	54
Reliability	8	27	0	35	61
Communication	9	8	16	33	68
Commitment	16	4	11	31	74
Friendliness	14	1	13	28	80
Availability	3	20	0	23	84
Functionality	1	20	0	21	88
Courtesy	4	9	6	19	92
Comfort	4	6	2	12	95
Cleanliness/tidy	4	4	0	8	96
Aesthetics	5	1	0	6	97
Flexibility	0	0	6	6	98
Security	0	5	0	5	99
Access	0	2	1	3	100
TOTAL	126	213	161	500	

Table 8.6 Summary of results in order of mention

It can be seen from table 8.6 that some quality factors were much more referred to than others. Indeed, half of the factors accounted for 80 per cent of references, with the top three (17 per cent) accounting for 40 per cent of the references. The bottom five factors (28 per cent) only accounted for five per cent of the total references. This variation supports the views of Parasuraman et al (1985) and Johnston and Lyth (1989) who maintained that the relative weighting of the quality factors will vary considerably.

It is interesting to note that almost all the factors in the top half, accounting for 80 per cent of responses, concerned the intangible side of service (with the exception of reliability which in some cases referred to the reliability of associated goods or equipment). Furthermore, the top four items which related to the behaviour, attitude and conduct of staff (care, attentive/helpfulness, responsiveness and competence) accounted for nearly 50 per cent of references. The more tangible aspects, comfort, cleanliness/tidiness, security, access and part of functionality, accounted for less than ten per cent of references. This would support Zeithaml et al's contention that "intangibles" is the least important dimension in service quality.

There were a large number of anecdotes and resulting factors which related to the service, in particular the interface between staff and customers. This is not too surprising given that the presence of the customer in the service system is an important characteristic of services (Sasser 1978, Voss 1985, Morris and Johnston 1987).

Nevertheless this highlights the importance of the staff/customer interface in the formulation of customer perceptions of service. Berry et al (1988) made a similar observation as a result of the analysis of their empirical data for SERVQUAL. One of the important messages which emerged from their work was that "human performance plays a major role in customers' perceptions of service quality" .

Initial comparison of satisfaction, dissatisfaction and recovery factors

Herzberg et al (1959) were able to draw some interesting conclusions about hygiene and motivating factors from the frequency with which interviewees referred to each factor. Analysis of the frequency with which each of the quality factors in this sample were mentioned also yields some interesting findings which can perhaps help to develop an understanding of the relative significance of the quality factors. Clearly the number of references made will not in itself facilitate a relative weighting of the factors since the fact that a customer mentioned,

say two factors, does not mean that he or she considered both to be of equal significance. Nevertheless, the frequency with which a quality factor was mentioned by a large number of customers can perhaps tell us something about which factors most commonly lead to satisfaction, dissatisfaction or recovery.

One simple test was to check to see if the responses in the three categories were significantly different from each other. The rank orders of the frequency of mentions of the three categories were compared using Spearman's coefficient of rank correlation to obtain an indication of their likely similarity. The null hypothesis was that there was no difference between the satisfaction, dissatisfaction and recovery factors. Table 8.7 provides the ranking of the factors and table 8.8 shows the pairwise correlation coefficients.

	S	D	R
Care	2	4	2
Attentive/helpfulness	1	8	1
Responsiveness	5	3	3
Competence	8	6	6
Integrity	13.5	1	11.5
Reliability	7	2	15.5
Communication	6	10	4
Commitment	3	13.5	7
Friendliness	4	16.5	5
Availability	13.5	6	15.5
Functionality	15	6	15.5
Courtesy	11	9	8.5
Comfort	11	11	10
Cleanliness/tidiness	11	13.5	15.5
Aesthetics	9	16.5	15.5
Flexibility	17	18	8.5
Security	17	12	15.5
Access	17	15	11.5

Table 8.7 Rank order of frequencies

	satisfaction	dissatis	recovery
satisfaction	-	0.217	0.697
dissatisfaction	0.217	-	0.105
recovery	0.697	0.105	-

Table 8.8 Pairwise comparisons of coefficients of rank correlation

It is interesting to note that the null hypothesis was rejected at 90 per cent for the correlation between satisfaction and dissatisfaction and between recovery and dissatisfaction. The relationship between satisfaction and recovery was significant at the 99 per cent level. This would suggest that the factors associated with dissatisfaction are different from those that create satisfaction whether direct satisfaction factors, or indirectly through recovery.

To facilitate direct comparison between the factors, the frequencies have been turned into percentages as there were different numbers of responses in each category. The percentages are shown in table 8.9.

	SATIS	DISSATIS	RECOVERY
Care	14	10	22
Attentive/helpfulness	16	5	23
Responsiveness	9	11	12
Competence	5	9	7
Integrity	2	15	1
Reliability	6	13	0
Commitment	13	2	7
Communication	7	4	10
Friendliness	11	0.5	8
Availability	2	9	0
Functionality	1	9	0
Courtesy	3	4	4
Comfort	3	3	1
Cleanliness/tidiness	3	2	0
Aesthetics	4	0.5	0
Flexibility	0	0	4
Security	0	2	0
Access	0	1	1
TOTAL	100	100	100

Table 8.9 Percentage responses by satisfying,
dissatisfying and recovery outcomes

One has to question just how significant the factors at the bottom of the table are in creating satisfaction, dissatisfaction or recovery. It is possible that either these factors are unimportant or the small number of referrals may have been due to the overall small sample size or the nature of the organisations chosen by respondents. It is maybe too early to try to draw any firm conclusions from these data.

Only two of the 18 factors were referred to as exclusive sources of satisfaction, dissatisfaction or recovery. Flexibility was the quality factor associated solely with recovery, and security (or rather the lack of it) with dissatisfaction. However, these two factors were in the

bottom three factors in table 8.9 and only accounted for four and two per cent of references respectively. Given this relatively low number of references, again some care needs to be exercised in drawing any firm conclusions.

The four factors most frequently referred to in creating satisfaction were attentive/helpfulness, care, commitment and friendliness (a total of 54 per cent of the satisfaction responses). All of these concerned the intangible nature of the service and correspond to Parasuraman et al's (1988) empathy and assurance dimensions. Responsiveness had some impact on satisfaction whereas reliability had no impact on satisfaction. This might be taken to conflict with Parasuraman et al who suggested that reliability is the main cause of service quality. However, Parasuraman et al's SERVQUAL instrument ascertained what was important to customers, it did not distinguish between what satisfied or dissatisfied. Reliability and responsiveness are important, but it would seem that they impact more on dissatisfaction than on satisfaction.

The dissatisfying factors were more evenly distributed, with seven factors, care, responsiveness, competence, integrity reliability, functionality and availability accounting for 76 per cent of responses. The four factors, most frequently referred to as dissatisfying were integrity, reliability responsiveness and care (49

per cent of the dissatisfaction responses), a mixture of tangible and intangible factors. Security, or rather the lack of it, was referred to exclusively as a dissatisfier, though given the low number of responses in this category, any conclusions drawn here must be treated cautiously.

The recovery factors were more sharply identified as they were much less evenly distributed than the satisfaction and dissatisfaction factors. The top four factors, attentive/helpfulness, care, responsiveness and communication accounted for 67 per cent of the responses, with care and attentive/helpfulness accounting for 45 of the responses. This emphasises the importance of the understanding and empathy provided by the service worker in recovery situations. Flexibility was only referred to in recovery situations but there were only six such referrals.

Table 8.10 identifies the four factors most referred to in each category.

Factors most referred to as satisfying	Factors most referred to as dissatisfying	Factors most referred to as recovery
Attentive/help	Integrity	Attentive/help
Care	Reliability	Care
Commitment	Responsiveness	Responsiveness
Friendliness	Care	Communication

Table 8.10 The key satisfying, dissatisfying and recovery factors?

There are several quality factors that appear in more than one of the categories. Care appears in all three. Attentive/helpfulness seems to be a source of satisfaction and recovery. Responsiveness also occurs in two categories, dissatisfaction and recovery. Does this invalidate hypothesis three? Some further analysis is necessary before this conclusion can be drawn.

A more telling analysis is to compare the percentage of mentions between each factor, so for each factor the percentage references for satisfaction, dissatisfaction and recovery have been calculated. This will identify the main *direction* of impact of each factor. This is shown in figure 8.1.

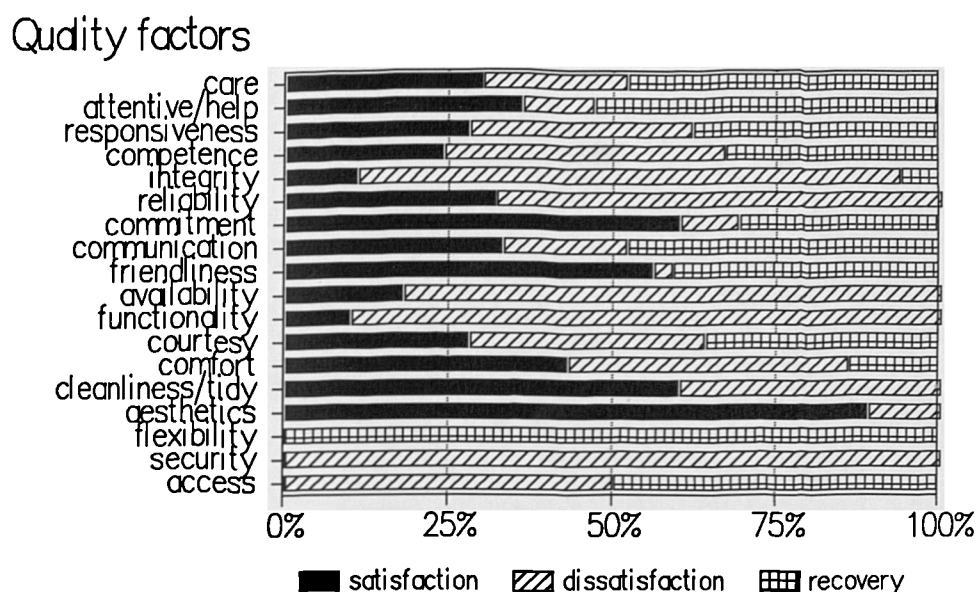


Figure 8.1 Between factor comparisons

The overall profile of factors is quite striking with very great differences between most of the factors. Flexibility and security, of course, show up as totally supporting recovery and dissatisfaction respectively. More interesting is the apparent low impact of friendliness and commitment on dissatisfaction, and functionality, integrity and availability on satisfaction, and the lack of impact of integrity, reliability, availability, functionality, cleanliness/tidiness, aesthetics and security on recovery.

These similarities and differences have been highlighted for each category in the following sections.

Satisfaction profile

Figure 8.2 shows the profile of the satisfaction responses in percentage order.

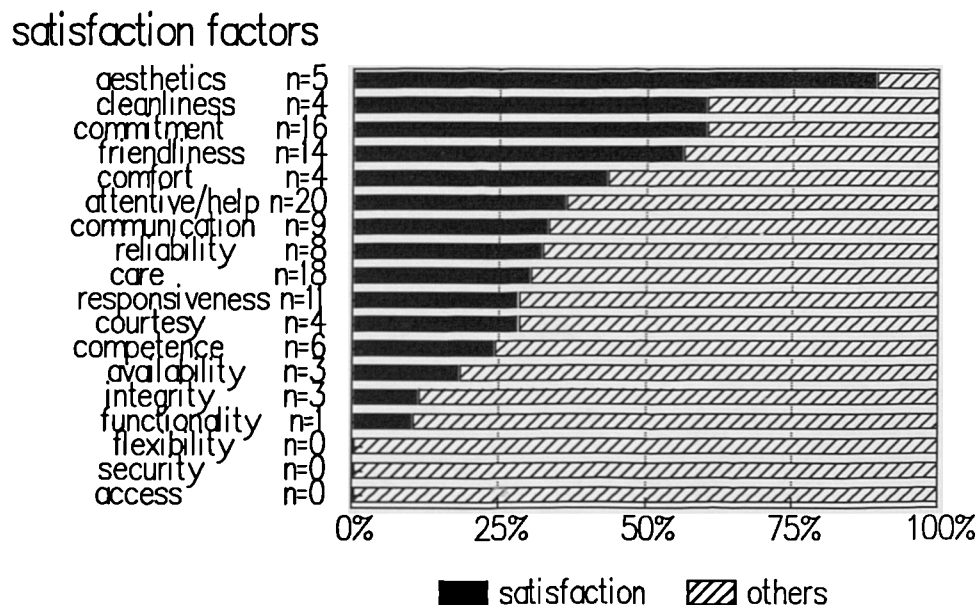


Figure 8.2 Satisfaction profile

Here one can see the marked impact of four factors, aesthetics, cleanliness/tidiness, commitment and friendliness accounting for over 50 per cent of their respective responses. Competence, availability, integrity, functionality, flexibility, security and

access having little impact, less than 25 per cent, on satisfaction.

Dissatisfaction profile

Figure 8.3 shows four main dissatisfaction factors, security, functionality, integrity and availability being responsible for more than 75 per cent of responses in each category. The factors seemingly having little impact on dissatisfaction include care, communication, attentive/helpfulness, aesthetics, commitment, friendliness, flexibility.

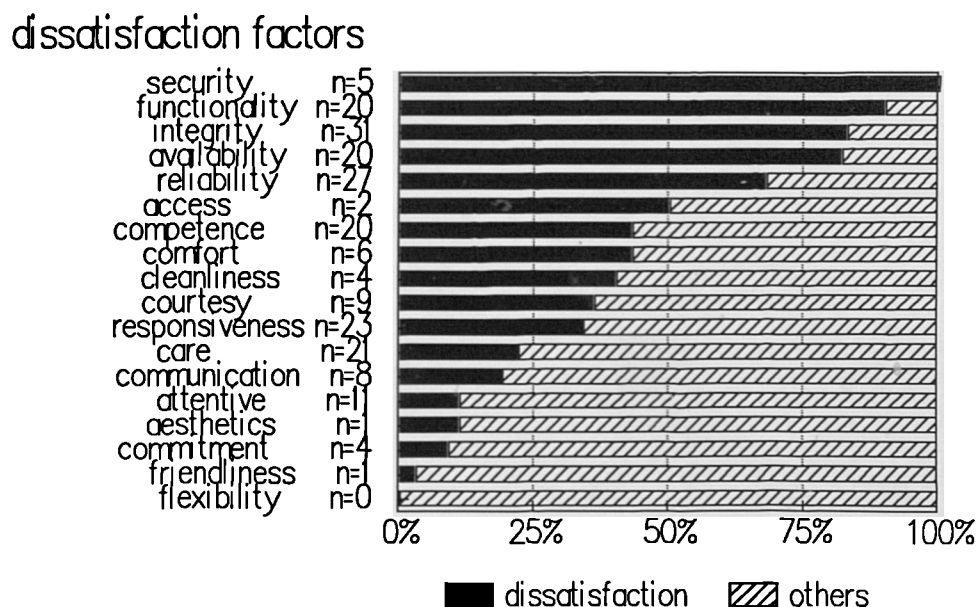


Figure 8.3 Dissatisfaction profile

Recovery profile

The key factor here is flexibility with attentiveness, access, care and communication some way behind. As seen in figure 8.4, the factors that seem to have little impact here include comfort, integrity, reliability, functionality, availability cleanliness, aesthetics and security.

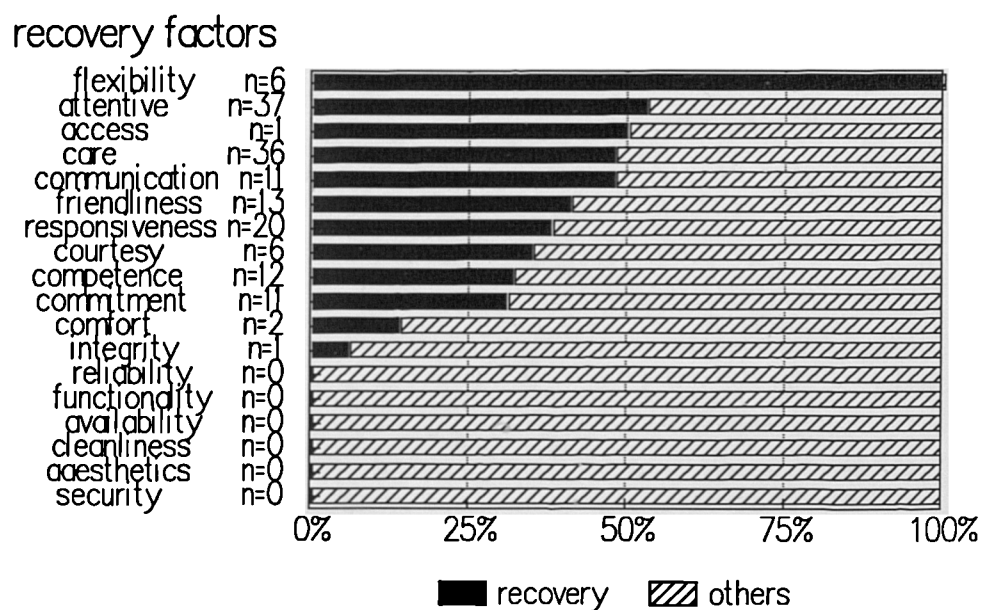


Figure 8.4 Recovery profile

These charts, however, paint a questionable picture as the number of responses in some categories would lead one to question the validity of the results. How, for example, can one claim that security has no impact on

satisfaction when there were only five references to security in the 500 total references or that flexibility is only a recovery factor with only six references in 500? To remove the effect of the factors where response was low it is suggested that the seven lowest response quality factors are unassigned at this stage. These seven items each gained less than five per cent of responses.

Figure 8.5 shows the key factors for each category.

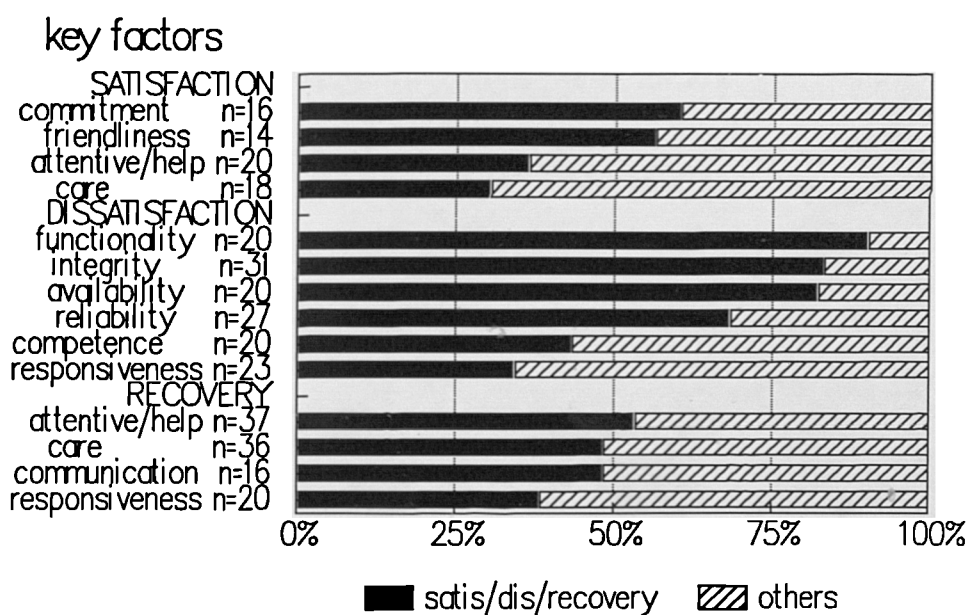


Figure 8.5 Key quality factors

The preliminary conclusion from the pilot study is then that the quality factors break down as in table 8.11.

Satisfying factors	Dissatisfying factors	Recovery factors	Unassigned factors
Commitment	Functionality	Attentive/help	Access
Friendliness	Integrity	Care	Aesthetics
Attentive/help	Availability	Communication	Cleanliness
Care	Reliability	Responsiveness	Comfort
	Competence		Courtesy
	Responsiveness		Flexibility
			Security

Table 8.11 The key satisfying, dissatisfying and recovery factors

For the most part these results, although based on a relatively small sample, appear to conform to intuitive expectation. One might well expect functionality, integrity, availability, reliability, competence and responsiveness to be factors which customers expect from a service, and, if the service organisation fails to provide them, the customer would feel dissatisfied. Furthermore, these are aspects of a service which may not be noticed unless they are not there and so are likely only to result in dissatisfaction. One would not expect customers to express great satisfaction because a service that is expected to be available or working is available and working, or its staff are competent.

The satisfaction factors are factors which one might expect to enhance customer perceptions of service, but when they are not provided, so long as the overall service level is adequate, the customer will not feel dissatisfied. Customers in many service situations do not necessarily expect staff to be friendly, attentive or

caring. Indeed customers may be tolerant about the lack of them, but when staff display these qualities they lead to a feeling of satisfaction.

The recovery factors too seem to be intuitively correct. To retrieve a situation a customer might expect that the service worker shows concern, consideration and sympathy (care) for their plight and that he or she demonstrates a willingness to help (attentiveness) and that something is seen to happen (helpfulness) quickly (responsiveness) and, most importantly, that the customer is given information about the nature of the problem and what is being done to put it right (communication). There may also be some form of follow-up to ensure that the situation was fully recovered (care).

Not surprisingly then, these recovery factors seem to accord with the principles of recovery suggested by Zemke and Bell (1989) which are acknowledgement, apology, empathy, information, action, atonement and follow-up. The recovery factors corresponding to the recovery principles are identified in table 8.12.

Acknowledgement	Care
Apology	Care
Empathy	Attentiveness and care
Information	Communication
Action	Helpfulness and responsiveness
Atonement	Care and helpfulness
Follow-up	Care

Table 8.12 Correspondence between recovery principles and factors

Seven factors remain unassigned; courtesy, comfort, cleanliness/tidiness, aesthetics, flexibility, security, access. These however, could be tentatively assigned to one of the three categories for the following reasons.

Flexibility could be allocated to recovery as it was only mentioned in the recovery anecdotes. This seems intuitively correct as a willingness on the part of the service worker to amend or alter the nature of the service or product to meet the needs of the customer may be required to recover a situation.

Access, courtesy, cleanliness, tidiness and security were mostly referred to in the dissatisfaction anecdotes. It seems intuitively right that the lack of any of these factors is more likely to be noticed, and therefore a source of dissatisfaction.

It is suggested that aesthetics could be a satisfier, as the most number of references were made in this category.

The derived and tentative satisfaction, dissatisfaction and recovery factors are summarised in table 8.13.

Satisfying factors	Dissatisfying factors	Recovery factors
Derived		
Commitment	Functionality	Attentive/help
Friendliness	Integrity	Care
Attentive/help	Availability	Communication
Care	Reliability	Responsiveness
	Competence	
	Responsiveness	
Tentative		
Aesthetics	Access	Flexibility
	Cleanliness	
	Comfort	
	Courtesy	
	Security	

Table 8.13 Derived and tentative satisfaction, dissatisfaction and recovery factors

DISCUSSION OF THE HYPOTHESES

Hypothesis one proposed that the various quality factors have different effects on the outcome of the service experience in the customer's mind, ie some factors are more important than others. The analysis above seems to fit with this hypothesis, in terms of both amount and type of effect of the factors. Figure 8.6 shows the data provided earlier in table 8.6.

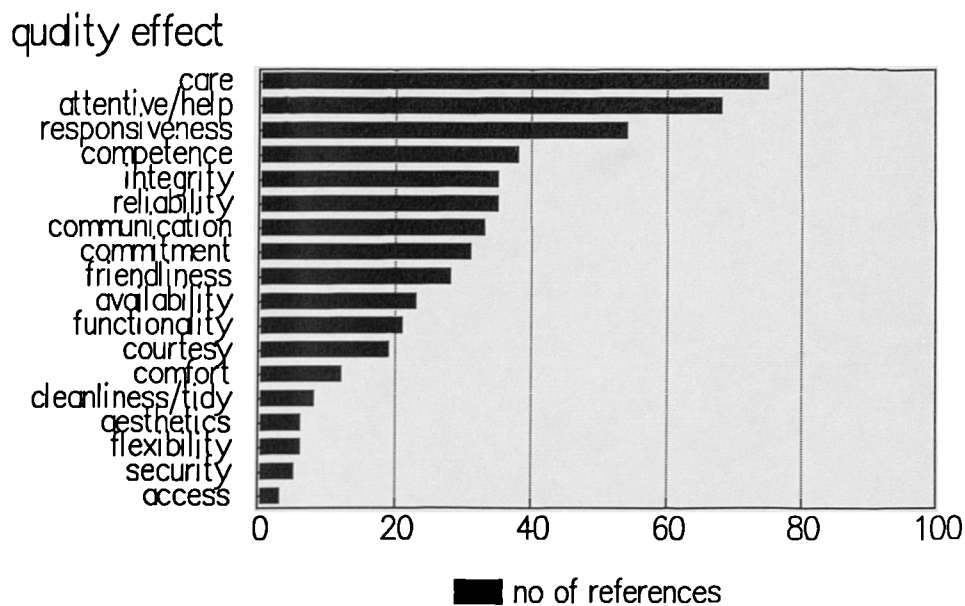


Figure 8.6 Effect of quality factors (1)

The variation in total effect, as represented by the frequency of responses, can be seen to be wide. Half of the factors accounted for 80 per cent of references, with the top three (17 per cent) accounting for 40 per cent of the references. The bottom five factors (28 per cent) only accounted for five per cent of the total references.

Their relative effect on satisfaction and dissatisfaction varies considerably too. Figure 8.7 is a rearrangement of figure 8.1 which shows the different impacts that the factors have on satisfaction and dissatisfaction.

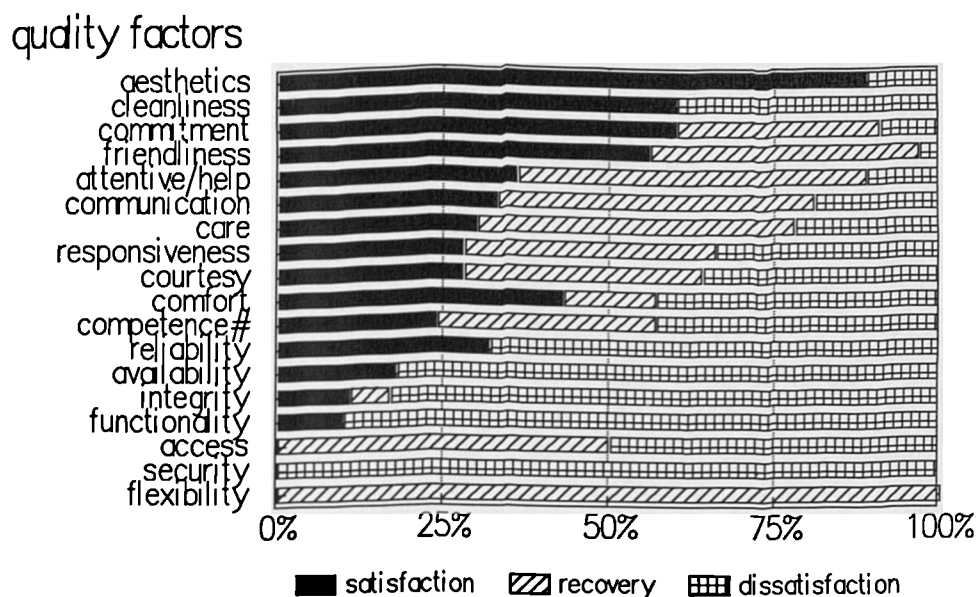


Figure 8.7 Effect of quality factors (2)

The factors at the top of the figure predominantly impact on satisfaction and the factors towards the bottom predominantly impact on dissatisfaction. Furthermore, the pairwise comparison of the coefficients of rank correlations between the three types of factors suggest that the factors that lead to satisfaction (the satisfaction and recovery factors) are different from those that lead to dissatisfaction. It should be noted that the factors that tend to satisfy are not the obverse of those that dissatisfy as was implied in Berry et al's work.

Although the sample had some biases there would seem to be some tentative support for hypothesis one that not all service quality factors have the same effect on satisfaction or dissatisfaction.

There is also support for hypothesis two which proposed that there are three types of service quality factors; satisfying, dissatisfying and recovery factors. It has been difficult to classify all the factors due to the very small number of mentions in some cases. However, table 8.14 (based on table 8.13) summarises the main impact that the factors seem to have. Where the impact is more questionable a question mark is found next to the factor.

Satisfying factors	Dissatisfying factors	Recovery factors
Commitment	Functionality	Attentive/help
Friendliness	Integrity	Care
Attentive/help	Availability	Communication
Care	Reliability	Responsiveness
?Aesthetics	Competence	?Flexibility
	Responsiveness	
	?Access	
	?Cleanliness	
	?Comfort	
	?Courtesy	
	?Security	

Table 8.14 The main impact of the quality factors

It does appear that there are some factors that predominantly satisfy, others that dissatisfy and there

are others that aid recovery. However, a small number of factors fit into more than one category.

Hypothesis three proposed that the three types of service quality factors are mutually exclusive, that is any single factor is either only a satisfier (an enhancing factor) or a dissatisfier (a hygiene factor) or a recovery factor. The overall profile of factors shows quite striking differences between most of the factors. Flexibility could be classified as a recovery factor and security as a hygiene factor, though the small number of responses requires this conclusion to be questioned. There are some factors that have a marked impact on satisfaction and some that have little impact on it. Competence, availability, integrity, functionality, flexibility, security and access have less than 25 per cent of the total effect on satisfaction. Likewise there are a number of outstanding dissatisfaction factors with others seemingly having little impact on dissatisfaction, including care, communication, attentive/helpfulness, aesthetics, commitment, friendliness, flexibility. There are key recovery factors too, with others having little impact, including comfort, integrity, reliability, functionality, availability cleanliness, aesthetics and security.

Table 8.15 summarises these impacts.

	SATIS	DISSATIS	RECOVERY
Access	N?	Y?	N?
Aesthetics	Y?	N?	N?
Attentive/helpfulness	Y	N	Y
Availability	N	Y	N?
Care	Y	N	Y
Cleanliness/tidiness	N?	Y?	N?
Comfort	N?	Y?	N?
Commitment	Y	N	N
Communication	N	N	Y
Competence	N	Y	N
Courtesy	N?	Y?	N?
Flexibility	N	N?	Y?
Friendliness	Y	N	N
Functionality	N	Y	N
Integrity	N	Y	N
Reliability	N	Y	N
Responsiveness	N	Y	Y
Security	N?	Y?	N

Table 8.15 A summary of the impact of the factors

There is some intuitive support for hypothesis three. One might well expect functionality, integrity, availability, reliability, competence and responsiveness to be factors which customers expect from a service, and, if the service organisation fails to provide them, the customer would feel dissatisfied. Furthermore, these are aspects of a service which may not be noticed unless they are not there and so are likely to result only in dissatisfaction. While one might expect the satisfaction factors to enhance customer perceptions of service, but when they are not provided, so long as the overall service level is adequate, the customer may not feel dissatisfied.

Despite the intuitive support, hypothesis three remains unsupported because of the overlaps found in the quality factors and the fact that there were only two factors exclusively impacting only on one category or another (and these are questionable due to the small number of responses).

It is possible that the mix of types of service industries in the sample, spanning most of the service sector, is a confounding factor here. It is possible that the enhancing, hygiene and recovery factors may vary between industries and even organisations. This is a point refuted by Berry et al, but supported in a recent working paper by Rosen and Karwan (1993) who concluded from their empirical study that the importance of the quality dimensions seems to vary by service setting. It might be then, that support could be found for the enhancing/hygiene distinction in a single service setting.

CONCLUSION

The pilot study had several purposes. One purpose was to undertake a preliminary test of the hypotheses. A second purpose was to evaluate the CIT instrument and the method of analysis.

1) A preliminary test of the hypotheses

The pilot study has found some support for hypotheses one and two, but not three. The various quality factors seem to have quite different effects on satisfaction and dissatisfaction in terms of both the type and amount of effect. The study has also identified several satisfying, dissatisfying and recovery factors though it has not been able to classify these more precisely into hygiene and enhancing factors. It is possible that the inconclusive classification of factors into hygiene, enhancing and recovery could be attributed to the wide range of organisations involved in the sample. It is possible that the precise categorisation may vary from industry to industry.

2) An evaluation of the CIT instrument

The methodology chapter identified five questions that the pilot study needed to answer:-

- a) Does CIT provide enough data to enable the identification of quality factors?

It is clear that the CIT has provided adequately rich descriptions of service situations to allow for easy identification of quality factors. Indeed, the 192 anecdotes yielded 500 references to quality factors.

- b) Are Johnston and Silvestro's (1990) 17 quality factors applicable and adequate?

The anecdotes provided examples of all 17 quality factors and indeed the anecdotes were easy to classify due to the range and clarity of the definitions provided by Johnston and Silvestro, although this was a very time consuming process. Three difficulties were encountered which led to the amendment of two of the categories and the addition of an eighteenth.

- c) Does CIT identify recovery situations?

The CIT successfully identified recovery situations. It yielded 51 recovery anecdotes out of the 96 satisfaction anecdotes, ie 53 per cent of the very satisfactory experiences were recovered failures. Furthermore, it has helped in the identification of types of failure situations.

- d) What sample size might be required for the main study?

Because of the large number of factors compared to the number of respondents, it is suggested that a much larger sample needs to be used in the main study. Furthermore as it will not be based upon such a relatively friendly

and willing set of respondents a higher non response rate is anticipated. However, the actual number will depend upon the willingness of the organisation(s) concerned in the main sample and the amount of access that will be given.

- e) Should the main study be multi-organisational or based on a single organisation?

It has been suggested that the inconclusive classification of factors into hygiene, enhancing and recovery could be attributed to the wide range of organisations included in the sample. In order to try to remove any such effects it is proposed that the main study confine itself to one particular sector of the service economy.

In summary, the pilot study has confirmed the arguments of both Parasuraman et al (1985) and Johnston and Lyth (1989) that service organisations should identify the relative weightings of the different quality factors from a customer perspective. If, for a given organisation, customer perceptions of quality are largely determined by a small number of key factors, this will help define the agenda of management concerns regarding for example service delivery, control and staff training. The analysis, though simple and qualitative in nature, has

been quite powerful and parallels the use of Pareto analysis (or ABC analysis) by purchasing managers in manufacturing.

The key remaining issue is hypothesis three. The earlier discussion suggested that the factors have split off in a way which is intuitively appealing. This would indicate that the enhancing/hygiene/recovery classification is worthy of further empirical exploration in the main study. It might also be worthy of note that none of Herzberg et al's factors were found to be exclusively dissatisfying or satisfying either, and this did not prompt them to abandon their hypothesis.

Appendix 8.1 QUESTIONNAIRE ON SERVICE QUALITY

Service organisations are those that do things for you or to you. They don't make things. A few examples of service organisations would be cinemas, restaurants, shops, doctors' and dental surgeries, banks, airlines, hairdressers, schools, insurance brokers and so on.

Think of a time (how long ago really doesn't matter so long as you recall it well) when you were a customer in a service organisation and felt very unhappy and dissatisfied with the service you received. In a few sentences describe the type of service, the situation and why you felt so unhappy with this service encounter.

Now think of a time when you were a customer in a service organisation and felt very pleased and satisfied with the service you received. Again, in a few sentences describe the type of service, the situation and why you felt so happy with this service encounter.

Finally, may I have just a few personal details. Please tick as appropriate:-

Sex:	Male__	Female__
Age:	Under 18__	18-30__ 31-50__ over 50__
Education:	Left school at around 16 years	__
	Left school at around 18 years	__
	Went into higher education	__

Appendix 8.2 REVISED FACTOR DEFINITIONS

Access

The physical approachability of service location, including the ease of finding one's way around the service environment and clarity of route.

Aesthetics

Extent to which the components of the service package are agreeable or pleasing to the customer, including both the appearance and the ambience of the service environment, the appearance and presentation of service facilities, goods and staff.

Attentive/helpfulness

The extent to which the service, particularly contact staff, either provide help to the customer or give the impression of being interested in the customer and show a willingness to serve.

Availability

The availability of service facilities, staff and goods to the customer. In the case of contact staff this means both the staff/customer ratio and the amount of time each staff member has available to spend with each customer. In the case of service goods availability includes both the quantity and range of products made available to the customer.

Care

The concern, consideration, sympathy and patience shown to the customer. This includes the extent to which the customer is put at ease by the service and made to feel emotionally (rather than physically) comfortable.

Cleanliness/tidiness

The cleanliness, neat and tidy appearance of the tangible components of the service package, including the service environment, facilities, goods and contact staff.

Comfort

The physical comfort of the service environment and facilities.

Commitment

Staff's apparent commitment to their work, including the pride and satisfaction they apparently take in their job, their diligence and thoroughness.

Communication

The ability of the service to communicate with the customer in a way he or she will understand. This includes the clarity, completeness and accuracy of both verbal and written information communicated to the customer and the ability to listen to and understand the customer.

Competence

The skill, expertise and professionalism with which the service is executed. This includes the carrying out of correct procedures, correct execution of customer instructions, degree of product or service knowledge exhibited by contact staff, the rendering of good, sound advice and the general ability to do a good job.

Courtesy

The politeness, respect and propriety shown by the service, usually contact staff, in dealing with the customer and his or her property. This includes the ability of staff to be unobtrusive and uninterfering when appropriate.

Flexibility

A willingness and ability on the part of the service worker to amend or alter the nature of the service or product to meet the needs of the customer.

Friendliness

The warmth and personal approachability (rather than physical approachability) of the service, particularly of contact staff, including cheerful attitude, the ability to make the customer feel welcome.

Functionality

The serviceability and fitness for purpose or 'product quality' of service facilities and goods.

Integrity

The honesty, justice, fairness and trustworthiness with which customers are treated by the service organisation.

Reliability

The reliability and consistency of performance of service facilities, goods and staff. This includes punctual service delivery and ability to keep to agreements made with the customer.

Responsiveness

Speed and timeliness of service delivery. This includes the speed of throughput and the ability of the service to respond promptly to customer service requests, with minimal waiting and queuing time.

Security

Personal safety of the customer and his or her possessions while participating in or benefiting from the service process. This includes the maintenance of confidentiality.

Chapter 9

MAIN STUDY

SUMMARY

Barclays Bank was chosen to be the organisation for the main study. It met with all of the criteria suggested in the methodology section. It was also the largest identifiable service organisation in the pilot study. Furthermore service quality was becoming a key competitive strategy for the banking industry and so the investigation was of interest to the Bank's managers.

A stratified random sample of personal bank account customers from four branches of Barclays Bank yielded 279 satisfying, 236 dissatisfying and 44 recovery anecdotes. These resulted in the identification of 877 factor mentions. All the anecdotes could be classified according to 17 of the 18 factors identified in the pilot study. Comfort was not referred to.

There was significant correlation between the results of the pilot study and the main study, and, between the four locations involved in the main study. The results from the main study into the personal bank account customers, however, provided a sharper distinction between the factors in each category.

It was suggested that the following factors have a major impact on satisfaction in terms of their frequency of response and/or relative importance; attentive/helpfulness, responsiveness, care, friendliness, commitment and courtesy. The factors resulting in dissatisfaction were integrity, reliability, responsiveness, availability, functionality and competence. The recovery factors were responsiveness, attentive/helpfulness, care, communication and flexibility. Four factors were unassigned; access, security, cleanliness/tidiness and comfort.

INTRODUCTION

The objective of this chapter is to describe the choice of the organisation for the study and to analyse the data so that the next chapter, chapter ten, can provide a discussion of the hypotheses.

The first section describes the choice of the organisation.

The second section describes the sample used and the third section the nature of the questionnaire and the changes made to it from the pilot study.

Section four analyses the *profiles of the respondents*.

Section five describes how the anecdotes were classified and some of the problems that arose.

The main section is section six which analyses the data.

THE CHOICE OF ORGANISATION

Barclays Bank, whose head quarters is a couple of miles from the University of Warwick, was approached as the organisation to be involved in the main investigation. Following discussions with managers from the Customer Services Department, it was agreed that the Bank would

allow direct access, by questionnaire, to their personal account customers.

The bank was chosen for several reasons; banks were well represented in the pilot study, the bank meet the criteria suggested in the methodology chapter and service quality was becoming to be a key competitive strategy for the high street banks.

a) coverage in the pilot study

The spread of anecdotes by industry sector included in the pilot study came predominantly from distribution, hotels, catering, banking, finance and insurance organisations (64 per cent of anecdotes). The largest identifiable service organisation was banks which accounted for 41 of the 47 financial sector anecdotes. The other large category, distribution, hotels and catering, covered a wide range of organisations.

b) meeting the criteria suggested in the methodology chapter

The organisation was willing to be involved and to provide access to its customer base. It had identifiable customers who had not just a single experience with that organisation as might be the case with some retailers, hotels and catering organisations, but had an ongoing

relationship, over several years, involving many transactions per year. Furthermore, there is an expectation of "adequacy" in banking, that is customers neither expect to have a very satisfying or dissatisfying experience, yet both of these exist, as demonstrated in the pilot study. The banking anecdotes covered all three categories; satisfaction, dissatisfaction and recovery, though dissatisfaction was the largest category with 24 anecdotes. There were eleven satisfying and six recovery anecdotes.

Barclays is a multi-site organisation, covering most of the country. The results might not only be generalisable to all Barclays high street branches, but to the personal banking sector as a whole.

c) increasing importance of service quality

As a result of deregulation, increased globalisation, the entry of new competitors and decreased customer loyalty, the high street banks have found themselves operating in an increasingly competitive market (Johne and Pavlidis, 1991). In the last few years the banks had used, with varying degrees of success, a number of competitive strategies including making major modifications to existing products (for example the Royal Bank of Scotland's home banking and the First Direct service from Midland Bank), new product introductions (switch cards

for example) and the increasing use of new and sophisticated technology (for example the wide spread introduction of ATMs capable of more than providing cash).

More recently banks have been looking at different ways of competing, particularly through the use of "service". Johne and Pavlidis (1991) concluded from their review of banks that it would seem that they have not as yet been too successful at this. This point is supported by Donnelly et al (1984) and Howcroft (1992). Donnelly et al, in particular, suggested that banks need to confront intangibility and move away from their current product focus. Donnelly et al saw "relationship banking" as the cornerstone for future banking, not just the acquisition of new customers but the retention of existing ones through a long term multiple service-based relationship.

Some of the strategies the banks have employed recently, particularly electronic banking, may have had the effect of driving the customer out of the branch making relationship banking more difficult to implement. The banks are beginning to recognise the value of not only customer retention through service quality but also the potential benefits of cross selling the wide range of bank products at the point of service.

Clarkson et al (1990) pointed out that the need for change is also being driven by personal account customers themselves. They claimed that customers are becoming both more sophisticated and more mobile. They found that about ten per cent of bank customers shift their banking allegiance every year, whereas, for decades, the annual change had been steady at two per cent.

What seems to be becoming important for the high street banks is the level of service quality provided to their customers. They need to ensure that they do not dissatisfy customers who may be more willing to move elsewhere than in the past as the products and associated technology can be found elsewhere. Some banks, for example TSB, which competes on price, see service quality at least as a qualifying criterion. Others, in particular Barclays and National Westminster, the banks with the largest share of the market, see it as a potential order winner. This study is therefore of importance, and of relevance, to the high street banks.

THE SAMPLE

The prime concern of this thesis is to identify the effects of the various quality factors in terms of their impact upon satisfaction, dissatisfaction or recovery. A second order concern is to consider whether the results can be generalised to the personal banking industry as a

whole or even across all service industries. The main concern then in selecting a sample is to ensure that it will not substantially bias the results rather than to ensure that it uses a representative sample. In order to try to remove biases and to fulfil the second order objective an attempt was made to try to obtain as representative a sample as possible within the scope afforded by the bank.

Barclays branches vary in size from a few hundred accounts to about 15 thousand. It would not be appropriate to choose branches at either extreme as both the small ones and the large ones (most of which are in London) might be seen to serve customers from backgrounds that may not reflect the rest of the population. It was decided to select branches, outside London, with about 8,000 to 10,000 accounts. Such branches cover a wide geographic area and would thus maximise the chance of including as wide as possible demographic profile. Unfortunately the bank does not have demographic statistics about its individual branches so it is very difficult to accurately assess how representative any branch is.

It was necessary to choose more than one branch to allow for internal consistency checks between the branches to see if there were any undue biases in the sample. The bank asked for the study to be limited to four branches

and it was agreed that these would be selected to cover the urban to rural dimension to try to provide a representative cross section. In order to maintain confidentiality the branches will be referred to as locations one to four. Table 9.1 shows the number of accounts held at each branch.

	approx total no. of accounts
Location 1	8,000
Location 2	8,000
Location 3	6,000
Location 4	9,000

Table 9.1 The number of accounts held at each branch

The bank agreed to provide the names and addresses of a ten per cent sample of its customers from three of the branches and a 15 per cent sample from the smallest, Location 3 to try to ensure that relatively equal numbers of questionnaires were distributed in each area.

The sample of customers was identified by selecting every tenth customer from the alphabetical computer records in each area (this avoided selecting customers with multiple bank accounts). If the selection was a company account, the previous account was selected.

THE QUESTIONNAIRE

The study was discussed individually with the four branch managers. They were all willing to participate on condition that they had copies of the completed questionnaires, an analysis of the content and an opportunity to discuss the results with the researcher.

The Bank agreed to provide a high quality questionnaire that would be typeset and colour printed. It was also agreed that a form letter would be sent with each questionnaire which would appear to come from the branch in question "signed" by the branch's manager. It was hoped that this, together with the reply-paid envelope would increase the likelihood of returns. A copy of the questionnaire can be found in appendix 9.1.

In the pilot study the questions had been switched round in half of the questionnaires to improve the internal consistency of the instrument. The Bank was reluctant to print more than one copy of the questionnaire.

The Customer Services Department requested the addition of two extra questions at the end of the questionnaire for their own purposes. These asked how long the respondent had been a Barclays customer and how often they visited the branch.

The Bank also required a different format for the age data to fit with their existing market research. The categories were; less than 20 years old, 20-29, 30-39, 40-49 50-59 and 60+.

PROFILE OF RESPONDENTS

More than ten per cent of the questionnaires were returned. The rate of return varied from eleven per cent (Location 2) to 14 per cent (Location 3). This yielded 431 completed questionnaires. Table 9.2 gives the number of responses from each branch.

LOCATION	1	2	3	4	OVERALL
No	99	90	127	115	431

Table 9.2 The number of responses from each branch

The following sections describe the sex, age and education profiles of the respondents.

Sex profile

The spread of sexes was relatively even, see table 9.3. Although there was a little variation from area to area, the total ratio of 47:53 is very similar to the actual sex ratio of the population as a whole which is 48.8 males to 51.2 females (Monthly Digest of Statistics,

March 1993). It is also an improvement on the pilot study which was 52 per cent male.

LOCATION	1	2	3	4	OVERALL
Male	46	51	49	43	47
Female	54	49	51	47	53

Table 9.3 Percentage of male and female respondents

Age profile

There was a high degree of consistency between the numbers of responses per age group between the four locations. Table 9.4 provides the percentage responses for comparison and table 9.5 the results of a variance analysis. The very small variance ratio, significant at well below five per cent suggests that there is no significant difference between the locations.

LOCATION	1	2	3	4	OVERALL
>20	6	5	7	8	7
20-29	13	7	8	18	11
30-39	5	11	13	9	10
40-49	18	20	13	15	16
50-59	19	21	15	15	17
60+	39	36	44	35	39

Table 9.4 Per cent responses by age group

	degrees of freedom	sum of squares of deviations	est. variance	variance ratio
Variation between locations	3	180	60	0.39
Variation within locations	20	3085	154	
Total variation	23	3265		

Table 9.5 Variance analysis of the age profiles

Table 9.6 shows the totals per age group in the sample and the numbers of bank accounts held as a percentage of the bank current account holding population (which is 64 per cent of the population over 16 years of age).

	MAIN STUDY % responses	POPULATION % with bank accounts (over 16) *
>20	7	7
20-29	11	17
30-39	10	20
40-49	16	19
50-59	17	13
60+	39	24

Table 9.6 Comparison of the responses by age group with the population

* Source - Financial Research Survey: Money Transmissions: Account Holding England and Wales: April - September, 1992

These percentages were converted into observed and expected frequencies in order to calculate the chi square statistic. The null hypothesis, that there is no difference between the sample and the population, was

rejected. This was primarily due to the large number of respondents in the 60+ category. Either the samples, or the branches, were biased toward this age group, or perhaps this age group comprised people who were more prepared to give the time needed to complete these questionnaires. Given the high degree of correlation between the age profiles of the four branches, one is tempted to conclude that the latter suggestion is more likely.

Education profile

Three problems arose in the classification of the demographic data which were not experienced in the pilot study. A small number of respondents wrote that they were still at school. There was no category to cover this. As there may have been others who had left the boxes blank as none of them fitted their status, those that admitted to being at school were coded as no response. Other respondents ticked two boxes indicating for example that they left school *and* went into higher education. In these cases, the respondent was coded as going into higher education as this was assumed to be the more recent activity. Table 9.7 shows the percentage responses in these categories.

LOCATION	1	2	3	4	OVERALL
Left at:					
16	50	57	38	47	47
18	14	10	20	20	16
Higher ed	36	33	42	33	37

Table 9.7 Per cent responses showing level of education

These samples provided a much wider spread of education compared to the pilot study which included mainly people going into higher education (67 per cent). There is a high degree of consistency between the locations though there is a higher proportion of later school leavers and respondents taking higher education in Location 3 and Location 4.

Overall the demographic profile of the respondents seems to be internally consistent between the locations and with the populations that they represent.

CLASSIFICATION OF ANECDOTES

The richness of the data was again surprising. Most respondents described in considerable detail their experiences of the incident in question. Many of the respondents provided anecdotes exceeding a hundred words in length, however, unlike the pilot study, many were very short, on occasions just a few words. The average anecdote length was just over thirty words (compared to the pilot of seventy words).

A number of the responses were found to be unusable. A number of respondents had left one or other of the categories blank. Just five had left the two main questions blank but completed the demographic questions. Others, in the satisfaction category had written that they were "satisfied" or that they were "always satisfied" or that they "had never felt very satisfied". In the dissatisfaction category some again had been left blank and other respondents had said that at no time had they felt "very dissatisfied". Table 9.8 shows the net number of usable satisfaction and dissatisfaction questionnaires.

LOCATION	1	2	3	4	OVERALL
TOTAL	99	90	127	115	431
SATISFACTION					
Blanks	3	7	14	7	31
Satisfied	11	11	16	18	56
Never very	7	3	7	4	21
	—	—	—	—	—
NET	78	69	90	86	323
DISSATISFACTION					
Blanks	30	18	27	18	93
No dissatis	15	14	23	30	82
	—	—	—	—	—
NET	54	58	77	67	256

Table 9.8 The net number of usable questionnaires

The blank responses and short answers (for example "satisfied") could not be used for identification of

quality factors and were therefore discarded leaving a total of 323 satisfaction anecdotes and 256 dissatisfaction anecdotes.

It is interesting to note that out of the 431 returns, there were more anecdotes relating to satisfaction (323) than there were to dissatisfaction (256). 41 per cent were either unable or unwilling to think of a time when they were dissatisfied with the bank's services. Furthermore, several respondents explained that they had to go back ten or 20 years to find an incident that led to a feeling of dissatisfaction. This should be compared to just twelve per cent who left the very satisfied question blank or said they had never felt very satisfied. Thirteen per cent gave very brief replies to this question stating that they were satisfied with the service but did not explain why.

One might conclude that much of the work of the bank falls into the zone of tolerance, maybe due in part to the overall low response rate but also due to the relatively large proportion of returned "blanks". This however, makes analysis of the satisfaction and dissatisfaction anecdotes more significant. Indeed, over five per cent of the dissatisfaction anecdotes expressed either a desire or an intention to change banks and a small proportion had just done so. Furthermore, a number of the satisfaction stories resulted from people being

well dealt with by Barclays after having left another bank. The amount of high levels of satisfaction and dissatisfaction might be small but their results could be seen to be significant for the retention and capture of customers.

Classification into quality factors

The remaining 323 satisfaction anecdotes and 256 dissatisfaction anecdotes were summarised onto index cards and were then classified into the 18 quality factors developed from the 17 provided by Johnston and Silvestro (1990) in the pilot study. There were no remaining unclassified anecdotes as all the anecdotes were well described by the 18 factors.

Appendix 9.2 provides some examples of the statements made by customers and their resulting classification.

In an attempt to verify the validity of the coding process, Rhian Silvestro was asked to code a sample of the questionnaires independently. She was chosen because of her familiarity with, and involvement in, the development of the 17 quality factors on which this work was based. She was allowed to select 25 questionnaires of her own choice. The first 25 non blank questionnaires were chosen from the Location 3 Branch. A comparison of

the researcher's coding and Silvestro's coding is contained in table 9.9.

Quest. No.	SATISFACTION ANECDOTES		DISSATISFACTION ANECDOTES	
	Johnston	Silvestro	Johnston	Silvestro
SC001	H, C	H, C	none	none
SC002	H	H	R	R, Av
SC003	F, Ac, Ct	F, Ac, Ct	none	none
SC004	none	none	Av, R	Av, R
SC005	H	H	Rel	Comm
SC006	R, Cour	R, Cour	none	none
SC007	none	none	Comp	Comp
SC009	C, F, H	C, F, H	none	none
SC010	none	none	I	I
SC012	H, Comp	H, Rel	Ac, Cour	Ac, Cour
SC013	none	none	Ac	Ac
SC014	Av, C	Av, I	none	Av
SC015	H, C, R	H, C, R	I, Rel	I, Comp
SC016	H, R	H, R	none	none
SC017	H, C	H, C	Av, I	Av, I
SC018	Av	Av	Av	Av
SC020	F	F	I	I
SC021	none	none	-	-
SC022	none	none	-	-
SC023	none	R, Comp	-	-
SC024	H, Comm	H, Comm	none	none
SC025	-	-	H	H
SC026	R, F	R, F	none	none
SC028	H	Cour	C, Cour	R, Cour
SC031	Av	Av	Fu	Fu

Key

Ac	Access	H	Attentive/helpfulness
Av	Availability	C	Care
Ct	Cleanliness/tidiness	Comm	Communication
Comp	Competence	Cour	Courtesy
F	Friendliness	Fu	Functionality
I	Integrity	Rel	Reliability
R	Responsiveness	none	no factors identified
-	blank (no anecdote)		

Table 9.9 Comparison of the codes given to a sample of anecdotes

Silvestro identified 33 quality factors in the 24 satisfaction anecdotes compared to Johnston's 31, and 21 dissatisfying factors compared to Johnston's 19. There was complete agreement on the coding of 36 out of the 46 anecdotes, partial agreement on a further six and disagreement on just three. This would suggest that while some amount of individual interpretation is required in the coding of anecdotes, there is a reasonable degree of consistency between the two coders.

Service failure and recovery

The portion of recovery situations found in the satisfaction anecdotes was much less than in the pilot study. The recovery anecdotes accounted for only 16 per cent of the satisfaction anecdotes, compared to 53 per cent in the pilot study.

This was not due to there being only a small number of problems from which the bank could recover. The large number of dissatisfaction anecdotes provide examples of many such missed opportunities for recovery.

Furthermore, many of the customers who were dissatisfied actually wrote that they felt the problems they had encountered were "rare" events and had the situation been dealt with by the staff the situation could have been recovered.

In some such situations a recovery had been attempted but was seen to be inadequate by the customer. Anecdotes in the dissatisfaction category described situations where customers received only a "reluctant apology", or where refunds had been "grudgingly" given, or when they asked for information but were just given a leaflet, or where the bank made a mistake but the manager refused not only to provide an apology but also to accept that an error had occurred. It would appear that the bank and its staff are either less willing to deal with failures and/or admit their existence, than the variety of organisations contained in the pilot study.

The 44 recovered failures could be classified in a similar way to the pilot study with the source of the error being either with the bank or the customer. However, in the cases of 13 recoveries, the problems had been caused by third party organisations which then created a problem for the customer.

a) bank-based failures

These were examples of when the bank got things wrong yet because staff made efforts to sort them out they became a source of satisfaction. For example four stories were of incorrect accounts being debited but being put right quickly. One other was of a problem in the securities department which a member of staff made great efforts to

resolve. One customer said the bank made a mistake and levied charges but staff were very apologetic and tried hard to sort it out. Another customer said that the bank did not correctly change a cheque book, but when it was pointed out the official was polite and accepted what had happened and rectified it immediately.

b) customer-based failures

These were situations in which the customer made a mistake or created a problem. For example one customer got his PIN wrong leaving him without cash or card which the bank sorted out straightaway. Another customer left a purse in a shop 60 miles from home. The purse was handed into a local branch who contacted the person and arranged to return the purse. One story was of a customer who was confused over direct debit payments. The issue was sorted out quickly and the customer was very happy. The bank sorted out the situation for other customers who had lost or had stolen their travellers cheques or credit cards.

c) other organisation's failures

There were 13 anecdotes of problems that were created for the customer by third party organisations. Two organisations did not pay in the salaries of its employees on time resulting in overdrafts. Another

organisation accused the customer of not paying a cheque which was due and the bank provided the required evidence speedily. Four stories were of customers who had received poor service at other banks and were delighted with the service provided by Barclays.

The types of failures are summarised in table 9.10.

SOURCE OF FAILURE	f	%
The bank	10	23
The customer	21	48
3rd party organisations	13	29
TOTAL	44	

Table 9.10 The sources of failure in the recovery situations

Table 9.11 shows the number of anecdotes available in the three categories once the recovery anecdotes had been separated from the satisfaction anecdotes. These anecdotes will be analysed in the next section.

LOCATION	1	2	3	4	OVERALL
SATIS	68	60	84	67	279
DISSATIS	54	58	77	67	256
RECOVERY	10	9	6	19	44

Table 9.11 Numbers of anecdotes by classification

ANALYSIS

A summary of the combined results from the four locations is shown in table 9.12. This table shows the frequency of reference to the 18 quality factors according to whether they resulted in satisfaction, dissatisfaction or recovery.

	SATIS	DISSATIS	RECOVERY	TOTAL
Access	2	4	0	6
Aesthetics	0	3	0	3
Attentive/help	134	7	22	163
Availability	31	43	0	74
Care	67	18	11	96
Cleanliness/tidy	1	0	0	1
Comfort	0	0	0	0
Commitment	20	0	0	20
Communication	12	20	7	39
Competence	18	18	1	37
Courtesy	33	10	1	44
Flexibility	1	1	3	5
Friendliness	56	2	3	61
Functionality	2	28	0	30
Integrity	0	63	0	63
Reliability	10	58	0	68
Responsiveness	81	54	26	161
Security	1	5	0	6
TOTAL	469	334	74	877
N=	279	256	44	579
Av (TOTAL/N)	1.7	1.3	1.7	1.5
(Av-pilot	2.4	1.9	2.7	2.2)

Table 9.12 Summary of results

There were 877 references covering 17 of the 18 quality factors. The physical comfort of the service environment and facilities was not mentioned in any of the 579 anecdotes. Most of the references, 469, were satisfying,

despite the removal of the recovery anecdotes from this classification. This is different from the pilot, though in that case a much higher proportion of anecdotes fell into the recovery classification.

Overall, there was an average of 1.5 factors per anecdote (compared with the pilot of 2.2) This is not surprising given two factors; the higher level of education in the pilot study and the respondents' greater willingness to provide more details due to the more personal nature of the approach.

In table 9.13, the results from table 9.12 have been rearranged by quality factor in frequency of total referrals.

	S	D	R	TOTAL	CUM %
Attentive/help	134	7	22	163	19
Responsiveness	81	54	26	161	37
Care	67	18	11	96	48
Availability	31	43	0	74	56
Reliability	10	58	0	68	64
Integrity	0	63	0	63	71
Friendliness	56	2	3	61	78
Courtesy	33	10	1	44	83
Communication	12	20	7	39	88
Competence	18	18	1	37	92
Functionality	2	28	0	30	95
Commitment	20	0	0	20	98
Access	2	4	0	6	98
Security	1	5	0	6	99
Flexibility	1	1	3	5	99
Aesthetics	0	3	0	3	100
Cleanliness/tidy	1	0	0	1	100
Comfort	0	0	0	0	100
TOTAL	469	334	74	877	

Table 9.13 Summary of results in order of mention

The results here are quite dramatic with just seven factors accounting for 80 per cent of the mentions and with eight factors accounting for less than five per cent.

Consistency tests

Three tests were carried out. The first test was to compare the difference between the rank order of frequencies between the satisfaction, dissatisfaction and recovery categories. The null hypothesis was that there is no difference between the categories. The second test compared the ordering of the total mentions and the satisfaction, dissatisfaction and recovery factors between the main study and the pilot study. The null hypothesis was that there is no difference between them. The third set of tests compared the satisfaction, dissatisfaction and recovery responses between the four locations. The null hypothesis was that there are no differences between the four locations.

As the requirement was to measure the association between sets of data expressed in an ordinal manner it was appropriate to use a coefficient of rank correlation. Spearman's coefficient of rank correlation (r_s) was calculated.

Test 1 - The difference between the categories in the
main study

If the rank orders of the frequency of mentions of the three categories are compared using Spearman's coefficient of rank correlation an indication of their likely similarity can be calculated. The null hypothesis was that there is no difference between the satisfaction, dissatisfaction and recovery factors. Table 9.14 provides the ranking of the factors and table 9.15 shows the pairwise correlation coefficients for both the main study and the pilot study.

MAIN STUDY			
	S	D	R
Attentive/help	1	10	2
Responsiveness	2	3	1
Care	3	7.5	3
Availability	6	4	-
Reliability	10	2	-
Integrity	-	1	-
Friendliness	4	14	5.5
Courtesy	5	9	7.5
Communication	9	6	4
Competence	8	7.5	7.5
Functionality	11.5	5	-
Commitment	7	-	-
Access	11.5	12	-
Security	14	11	-
Flexibility	14	15	5.5
Aesthetics	-	13	-
Cleanliness/tidy	14	-	-
Comfort	-	-	-

Table 9.14 Rank order of frequencies

	satisfaction	dissatis	recovery
MAIN STUDY			
satisfaction	-	0.103	0.665
dissatisfaction	0.103	-	0.123
recovery	0.665	0.123	-
PILOT STUDY			
satisfaction	-	0.217	0.697
dissatisfaction	0.217	-	0.105
recovery	0.697	0.105	-

Table 9.15 Pairwise comparisons of coefficients of rank correlation

As it was in the pilot study, the null hypothesis was rejected at 90 per cent for the correlation between satisfaction and dissatisfaction and between recovery and dissatisfaction. Satisfaction and recovery were again significant at the 99 per cent level. This would suggest that the factors associated with dissatisfaction are significantly different from those that create satisfaction whether directly, as satisfaction factors, or indirectly through recovery.

The correlations between satisfaction and dissatisfaction, and recovery and dissatisfaction were about 0.1. This suggests no correlation rather than an inverse correlation (where a r_s of -1 would be expected). It would appear then, that the dissatisfaction factors are not the obverse of the satisfaction and recovery factors.

Test 2 - The main study and the pilot study

Table 9.16 shows the ranks for the three categories for the main study and the pilot study and table 9.17 shows the resulting coefficients of correlation comparing the rank orderings of the factors for satisfaction in the main study and the pilot study, and then repeating this for dissatisfaction and recovery.

	MAIN STUDY				PILOT STUDY			
	S	D	R	T	S	D	R	T
Attentiveness	1	10	2	1	1	8	1	2
Responsiveness	2	3	1	2	5	3	3	3
Care	3	7.5	3	3	2	4	2	1
Availability	6	4	-	4	13.5	6	-	10
Reliability	10	2	-	5	7	2	-	6
Integrity	-	1	-	6	13.5	1	11.5	5
Friendliness	4	14	5.5	7	4	16.5	5	9
Courtesy	5	9	7.5	8	11	9	8.5	12
Communication	9	6	4	9	6	10	4	7
Competence	8	7.5	7.5	10	8	6	6	4
Functionality	11.5	5	-	11	15	6	-	11
Commitment	7	-	-	12	3	13.5	7	8
Access	11.5	12	-	13	17	15	11.5	18
Security	14	11	-	14	17	12	-	17
Flexibility	14	15	5.5	15	17	18	8.5	15.5
Aesthetics	-	13	-	16	9	16.5	-	15.5
Cleanliness	14	-	-	17	11	13.5	-	14
Comfort	-	-	-	18	11	11	10	13

Table 9.16 Rank orders for pilot and main study

	r_s	df
Satisfaction	0.672	17
Dissatisfaction	0.858	17
Recovery	0.884	11
Total	0.809	17

Table 9.17 Coefficients of correlation between the pilot and the main study

All of the relationships were significant at over 99 per cent so it can be concluded that there is no difference between the results of the pilot and the main study, ie that there is little difference between the factors identified in the personal banking service in these four Barclays branches to the variety of service organisations involved in the pilot study. However, despite these very high levels of correlation there are some important differences in terms of frequencies; the main study had a much sharper, more pronounced, profile than the pilot study. There were also some important differences in terms of the ranks, for example there is only one rank that is the same in the total figures, functionality comes out as 11th in both. Six were within one rank but availability, one of the top factors, was different by six places. Some further detailed investigation is required and will be carried out in later sections.

The banking anecdotes were then removed from the results of the pilot study and the test repeated to ascertain if the 41 banking anecdotes would bias the results. The rank order of the recovery factors was unchanged and there were small adjustments to the ranks of the satisfaction and dissatisfaction factors. The result was that the coefficients of rank correlation were slightly lower, but still significant at above 98 per cent. This would suggest that there is little difference in the

factors identified in a wide range of non-banking service organisations and the personal account sector.

Test 3 - Between the locations in the main study

The following tables show the ranked responses between the locations in the main study (and also the pilot study) for satisfaction (table 9.18), dissatisfaction (9.20) and recovery (9.22), with the associated pairwise comparisons of coefficients, tables 9.19, 9.21 and 9.23.

a) satisfaction

Location	MAIN STUDY				TOT SAT	PILOT STUDY
	1	2	3	4		TOT SAT
Attentive/help	1	1	1	1	1	1
Responsiveness	3	2	2	2	2	5
Care	2	3	3	4	3	2
Friendliness	4	4	4	3	4	4
Courtesy	5	5	6	6	5	11
Availability	6	6	6	5	6	13.5
Commitment	9	8	6	7.5	7	3
Competence	8	7	9	7.5	8	8
Communication	7	11	10	9	9	6
Reliability	10.5	9.5	8	11	10	7
Functionality	-	9.5	-	-	11.5	15
Access	10.5	-	-	11	11.5	17
Flexibility	-	-	11.5	-	14	17
Cleanliness	-	-	-	11	14	11
Security	-	-	11.5	-	14	17
Aesthetics	-	-	-	-	-	9
Integrity	-	-	-	-	-	13.5
Comfort	-	-	-	-	-	11

Table 9.18 Rank orders satisfaction for pilot and main study

The top six factors were consistent between all the sites with little variation in order. Overall there was no significant difference between any of the locations (at over 99 per cent confidence level).

The pairwise comparisons provide correlation coefficients as shown in table 9.19.

LOCATION	1	2	3	4
1	-	0.876	0.870	0.951
2	0.876	-	0.931	0.940
3	0.870	0.931	-	0.944
4	0.951	0.940	0.944	-

Table 9.19 Pairwise comparisons

b) dissatisfaction

	MAIN STUDY					PILOT STUDY
Location	1	2	3	4	TOT DISSAT	TOT DISSAT
Integrity	1	1	3	1	1	1
Reliability	2.5	2	1	3	2	2
Responsiveness	2.5	3.5	2	4	3	3
Availability	4.5	3.5	4	2	4	6
Functionality	4.5	5	6.5	5	5	6
Communication	6.5	9	5	6.5	6	10
Competence	6.5	6	8	8	7.5	6
Care	8	7	6.5	9.5	7.5	4
Courtesy	10	12	9.5	6.5	9	9
Attentive/help	10	12	9.5	11.5	10	8
Security	10	12	-	11.5	11	12
Access	-	-	11	9.5	12	15
Aesthetics	-	8	-	-	13	16.5
Friendliness	12	12	-	-	14	16.5
Flexibility	-	12	-	-	15	18
Commitment	-	-	-	-	-	13.5
Cleanliness	-	-	-	-	-	13.5
Comfort	-	-	-	-	-	11

Table 9.20 Rank orders dissatisfaction for pilot and main study

Again the top six factors were very consistent with only minor changes in orderings. Overall they were correlated at over the 99 per cent level. Table 9.21 shows the pairwise comparisons of the correlation coefficients.

LOCATION	1	2	3	4
1	-	0.919	0.909	0.880
2	0.919	-	0.892	0.839
3	0.909	0.892	-	0.843
4	0.880	0.839	0.843	-

Table 9.21 Pairwise comparisons

c) Recovery

Location	MAIN STUDY				PILOT STUDY	
	1	2	3	4	TOT RECOV	TOT RECOV
Responsiveness	1	2	1	1	1	3
Attentive/help	2	2	2.5	2	2	1
Care	3.5	2	2.5	3	3	2
Communication	3.5	6	4.5	4	4	4
Friendliness	-	4	4.5	-	5.5	5
Flexibility	-	6	-	5	5.5	8.5
Courtesy	-	6	-	-	7.5	8.5
Competence	-	-	-	6	7.5	6
Availability	-	-	-	-	-	-
Reliability	-	-	-	-	-	-
Integrity	-	-	-	-	-	11.5
Functionality	-	-	-	-	-	-
Commitment	-	-	-	-	-	7
Access	-	-	-	-	-	11.5
Security	-	-	-	-	-	-
Aesthetics	-	-	-	-	-	-
Cleanliness	-	-	-	-	-	-
Comfort	-	-	-	-	-	10

Table 9.22 Rank orders recovery for pilot and main study

Despite the smaller number of observations, and therefore degrees of freedom, the results yielded correlation coefficients showing significance at over 95 per cent. The pairwise comparisons are shown in table 9.23.

LOCATION	1	2	3	4
1	-	0.759	0.875	0.971
2	0.759	-	0.919	0.696
3	0.875	0.919	-	0.830
4	0.971	0.696	0.830	-

Table 9.23 Pairwise comparisons

The analyses suggest that there is a high degree of reliability between the four sites suggesting that the factors are consistent between the three categories. There is also a high degree of correlation with the pilot study.

Having established consistency between the sites, the results have been combined for the analysis of the satisfaction, dissatisfaction and recovery factors.

Initial comparison of satisfaction, dissatisfaction and recovery factors

To facilitate direct comparison, the combined frequencies for the four locations have been turned into percentages as there were different numbers of responses in each category. The percentages are shown in table 9.24.

In the pilot study only two of the 18 factors were referred to as exclusive sources of satisfaction, dissatisfaction or recovery. Flexibility was the quality factor associated solely with recovery and security (or rather the lack of it) with dissatisfaction. In the main study these two factors were in the bottom five factors in table 9.13 and only accounted for about one per cent of total references. Both of these factors were found to be sources of satisfaction and dissatisfaction in table 9.24. Given the low frequency of response it would seem unwise now to suggest that these are exclusive sources of satisfaction or dissatisfaction.

In the main study, integrity, the sixth most referred to factor overall, was found to be a source of dissatisfaction only. Commitment, although seventh from the bottom of the overall table was seventh ranking in importance as a source of satisfaction. Aesthetics and cleanliness/tidiness were sources of dissatisfaction and satisfaction respectively, though the low number of responses makes conclusions unwise. Flexibility scored a few responses for recovery in the pilot study. In the main study, it again was seen to be important to recovery although it was also mentioned once as a source of satisfaction and once as a source of dissatisfaction.

	SATIS	DISSATIS	RECOVERY
Attentive/helpfulness	29	2	30
Responsiveness	17	16	35
Care	14	5	15
Availability	7	13	0
Reliability	2	17	0
Integrity	0	19	0
Friendliness	12	1	4
Courtesy	7	3	1
Communication	3	6	9
Competence	4	5	1
Functionality	0.4	9	0
Commitment	4	0	0
Access	0.4	1	0
Security	0.2	1.5	0
Flexibility	0.2	0.5	5
Aesthetics	0	1	0
Cleanliness/tidiness	0.2	0	0
Comfort	0	0	0
TOTAL	100.4	100	100

Table 9.24 Percentage responses by satisfying, dissatisfying and recovery outcomes

The four factors most frequently referred to in creating satisfaction in the pilot study were attentive/helpfulness, care, commitment and friendliness (a total of 54 per cent of the satisfaction responses). There were two differences in the main study. First commitment had been replaced by responsiveness and second these four accounted for 72 per cent of mentions. All of these factors concern the intangible nature of the service and correspond to Berry et al's empathy, assurance and responsiveness dimensions. However, reliability, was sixth in the list and primarily a source of dissatisfaction. This like the pilot study conflicts with Berry et al who identified reliability as the main cause of service quality. However, Berry et al's

SERVQUAL instrument ascertained what was important to customers, it did not distinguish between what satisfied or dissatisfied. Reliability is important, but affects dissatisfaction more than satisfaction. Responsiveness came to the fore in this study, the second most mentioned factor, adding support to its importance identified by Berry et al.

A number of the dissatisfying factors were more pronounced than in the pilot study. In the pilot study, seven factors care, responsiveness, competence, integrity, reliability, functionality and availability accounted for 76 per cent of responses. The four factors most frequently referred to as dissatisfying in the main study were integrity, reliability, responsiveness and care (49 per cent of the dissatisfaction responses). In this study, the top five factors, integrity, reliability, responsiveness, availability and functionality accounted for 74 per cent of the responses.

The recovery factors were again more sharply identified than in the pilot study. The top four factors were the same, though the ordering was different.

Attentive/helpfulness, care, responsiveness and communication accounted for 89 per cent of the responses (compared to 67 per cent in the pilot study).

It would seem that the effect of the single organisation, whilst not making any significant alteration to the overall ranking of the satisfaction, dissatisfaction and recovery factors, has identified a smaller number of them as being more important to the customers of this one organisation.

Table 9.25 identifies the four factors most referred to in each category, in the pilot study and the main study.

Factors most referred to as satisfying	Factors most referred to as dissatisfying	Factors most referred to as recovery
PILOT STUDY		
Attentive/help Care Commitment Friendliness	Integrity Reliability Responsiveness Care	Attentive/help Care Responsiveness Communication
MAIN STUDY		
Attentive/help Responsiveness Care Friendliness	Integrity Reliability Responsiveness Availability	Responsiveness Attentive/help Care Communication

Table 9.25 The key satisfying, dissatisfying and recovery factors in the pilot study and main study

Comparison of the relative impact of the quality factors

Like the pilot study, the percentage of mentions between each factor have been calculated to identify the main *direction* of the impact of each factor. This is shown in figure 9.1.

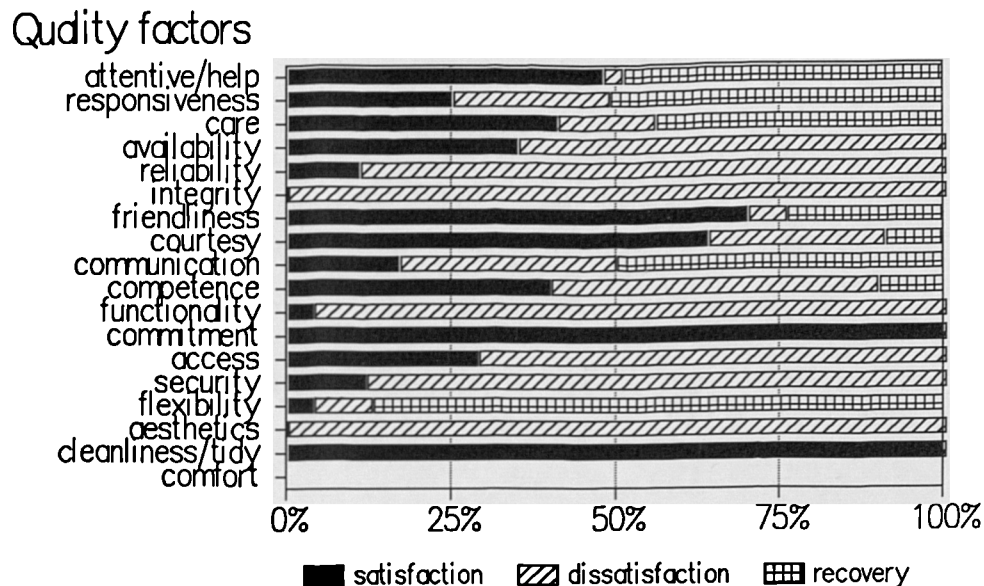


Figure 9.1 Between factor comparisons

Again, the overall profile of factors is quite dramatic with very great differences between most of the factors. In the pilot, flexibility and security were identified as supporting only recovery or dissatisfaction respectively, though with relatively few mentions. In this study, one of the higher frequency factors, integrity, was only a factor of dissatisfaction. Supporting only satisfaction was commitment and cleanliness/tidiness, and aesthetics led to dissatisfaction, though the frequencies of the

cleanliness/tidiness and aesthetics categories are too small to draw firm conclusions.

However, even cutting off the factors at the bottom half of the table, which accounted for only about ten per cent of the mentions, the differences of impact between the factors is considerable. The following sections look in more detail at these.

Satisfaction profile

Figure 9.2 shows the profile of the satisfaction responses in percentage order.

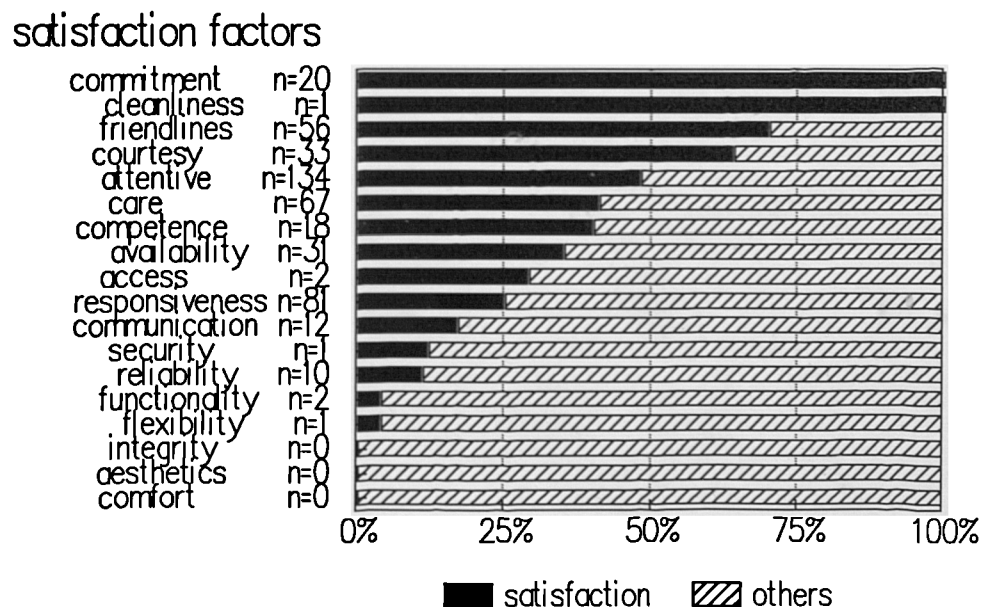


Figure 9.2 Satisfaction profile

Here one can see the marked impact of four factors, commitment, cleanliness/tidiness, friendliness and courtesy which accounted for over 50 per cent of their respective responses. (Compared to the pilot factors providing over 50 per cent responses; aesthetics, cleanliness/tidiness, commitment and friendliness). Communication, security, reliability, functionality, flexibility, integrity, aesthetics and comfort all have little relative impact (less than 25 per cent) on satisfaction.

Responsiveness is an interesting case, though representing only 25 per cent of relative responses, it was identified in 81 (17 per cent) of the satisfaction anecdotes, the second largest scorer, after attentive/helpfulness. As responsiveness was such a high scorer in all the three categories, thus lowering its relative importance in this analysis, it cannot be dismissed as having little impact on satisfaction.

Dissatisfaction profile

Figure 9.3 shows five outstanding dissatisfaction factors; security, integrity, aesthetics, functionality, and reliability being responsible for more than 75 per cent of responses in each category. Access, availability and competence were a little way behind accounting for over 50 per cent of relative responses. The factors

seemingly having little impact on dissatisfaction include care, flexibility, friendliness, attentive/helpfulness, commitment, cleanliness and comfort.

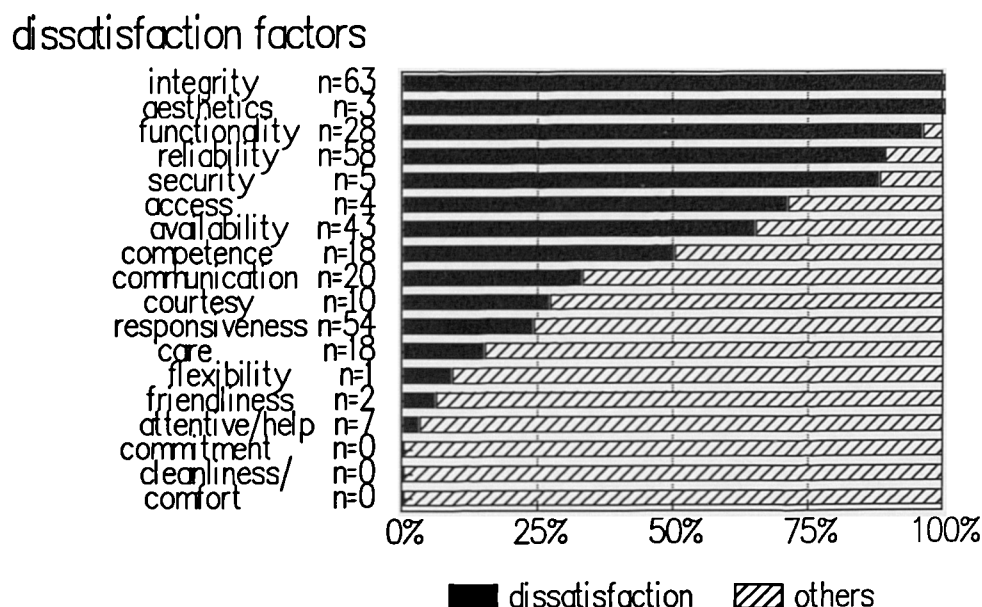


Figure 9.3 Dissatisfaction profile

Recovery profile

The outstanding factor here, as it was in the pilot study, was flexibility with 87 per cent of relative responses, although the number of mentions in the anecdotes was only three. Given that its only affect in the pilot study was on recovery, it might be suggested then that flexibility could be considered to be a recovery factor. Responsiveness, communication, attentive/helpfulness and care were some way behind. As

seen in figure 9.4, the factors that had no impact on recovery were availability, reliability, integrity, functionality, commitment, access, security, aesthetics, cleanliness, and comfort.

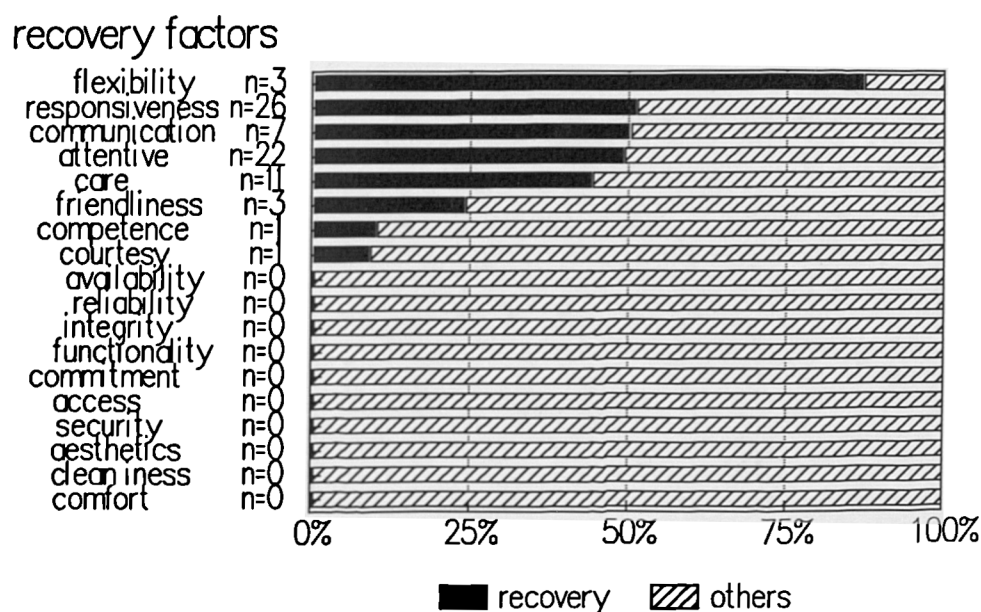


Figure 9.4 Recovery profile

These charts, however, paint a questionable picture as the number of responses in some categories would lead one to question the validity of the results. How, for example, can one claim that cleanliness is a satisfaction factor when it was only once identified or aesthetics as a dissatisfaction factor with only three mentions? To remove the effect of the factors where response was low, it is suggested that the six lowest response quality

factors are unassigned at this stage. These six factors each gained less than 20 responses.

Figure 9.5 shows the key factors for each category.

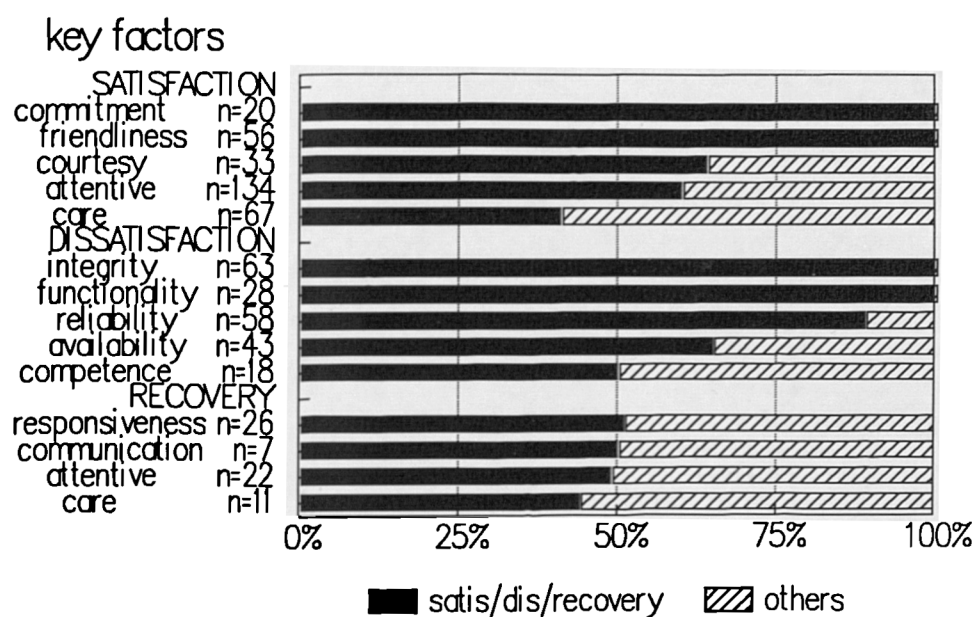


Figure 9.5 Key quality factors

The conclusion from this study is that the quality factors break down as per table 9.26. (This table also shows the results from the pilot study).

The results are very similar to those from the pilot study, though the ordering is different. There is one additional satisfaction factor here, courtesy. Responsiveness does not appear as a source of dissatisfaction, and the recovery factors are identical.

There was also an argument made earlier, though not totally convincing, for the unassigned flexibility being added to the recovery list. Five factors would then remain unassigned (access, security, aesthetics, cleanliness/tidiness and comfort). It would seem unwise to make any suggestion here other than state that these factors were not significant sources of satisfaction, dissatisfaction or recovery. One might assume that either these are factors where customers have very wide zones of tolerance or that they are factors that are not important to personal banking service quality. A different study would be required to differentiate between the two.

Satisfying factors	Dissatisfying factors	Recovery factors	Unassigned factors
MAIN STUDY			
Commitment	Integrity	Responsiveness	Access
Friendliness	Functionality	Communication	Security
Courtesy	Reliability	Attentive/help	Flexibility
Attentive/help	Availability	Care	Aesthetics
Care	Competence		Cleanliness
			Comfort
PILOT STUDY			
Commitment	Functionality	Attentive/help	Access
Friendliness	Integrity	Care	Aesthetics
Attentive/help	Availability	Communication	Cleanliness
Care	Reliability	Responsiveness	Comfort
	Competence		Courtesy
	Responsiveness		Flexibility
			Security

Table 9.26 The key satisfying, dissatisfying and recovery factors from the main and the pilot study

Responsiveness is a factor that deserves special attention. Here it is included only in the recovery list as it was both a high scorer and accounted for 51 per cent of relative responses. There is an argument that it should also be included in the satisfaction and dissatisfaction lists. Responsiveness gained 161 mentions in the anecdotes, 18 per cent of the total. It was the second highest factor in the satisfaction factors and third in dissatisfaction. Because of the high response, covering all three factors it shows up less in the between-factor comparisons. It is therefore suggested that this be included in all three categories.

The amended satisfaction, dissatisfaction and recovery factors in order of frequency of mention are summarised in table 9.27.

Satisfying factors	Dissatisfying factors	Recovery factors
Attentive/help	Integrity	Responsiveness
Responsiveness	Reliability	Attentive/help
Care	Responsiveness	Care
Friendliness	Availability	Communication
Commitment	Functionality	Flexibility
Courtesy	Competence	

Table 9.27 Suggested satisfaction, dissatisfaction and recovery factors

SUMMARY

A CIT questionnaire sent to a stratified random sample of personal bank account customers from four branches of Barclays Bank yielded 279 satisfying, 236 dissatisfying and 44 recovery anecdotes.

The percentage of responses were less than in the pilot study, however 877 factor mentions were recorded. All the anecdotes could be classified according to 17 of the 18 factors identified in the pilot study; comfort was not referred to.

There was significant correlation between the results of the pilot study and the main study, and between the four locations involved in the main study. The main difference was that the results from the main study into personal bank account customers yielded a sharper distinction between the factors in each category.

It was suggested that the following factors have a major impact on satisfaction, dissatisfaction or recovery in terms of their frequency of response and/or relative importance:-

Satisfaction factors

attentive/helpfulness
responsiveness
care
friendliness
commitment
courtesy.

Dissatisfaction factors

integrity
reliability
responsiveness
availability
functionality
competence

Recovery factors

responsiveness
attentive/helpfulness
care
communication
flexibility.

The factors that were unassigned were access, security, cleanliness/tidiness and comfort.

APPENDIX 9.1 THE QUESTIONNAIRE

Please use the spaces provided to write down your responses to the questions which follow. Once you have completed all three sections, return this sheet to us in the envelope provided. In order that your reply remains confidential, we have not asked for your name and address.

1. Think of a time (how long ago does not really matter as long as you remember it well) when you, as a customer of Barclays Bank, felt very satisfied with the service you received from the Bank.

In a few sentences, please describe the situation and explain why you felt so satisfied.

2. Now think of a time when, as a customer of Barclays Bank, you felt dissatisfied with the service you received. Again, in a few sentences, please describe the situation and why you felt so dissatisfied.

3. Finally, your answers to the following will help us to classify your response.

Sex	Age	Education	How long have you been a Barclays customer?	How often do you visit your branch?
Male <input type="checkbox"/>	Under 20 <input type="checkbox"/>	Left school at around 16 years of age <input type="checkbox"/>	Less than a year <input type="checkbox"/>	A couple of times a week <input type="checkbox"/>
Female <input type="checkbox"/>	20-29 <input type="checkbox"/>	Left school at around 18 years of age <input type="checkbox"/>	Between 1 & 5 years <input type="checkbox"/>	A couple of times a fortnight <input type="checkbox"/>
	30-39 <input type="checkbox"/>	Left school at around 18 years of age <input type="checkbox"/>	Between 6 & 10 years <input type="checkbox"/>	A couple of times a month <input type="checkbox"/>
	40-49 <input type="checkbox"/>	Went on to Higher Education <input type="checkbox"/>	More than 10 years <input type="checkbox"/>	A couple of times a quarter <input type="checkbox"/>
	50-59 <input type="checkbox"/>			Other, Please specify _____
	Over 60 <input type="checkbox"/>			_____

Thank you.

APPENDIX 9.2 SOME EXAMPLES OF CUSTOMERS' ANECDOTES AND THEIR CLASSIFICATION

ACCESS

satisfied

"the branch is very handy in the shopping centre"

dissatisfied

"it is very difficult for me to mount the steps into the other department"

AESTHETICS

satisfaction

-

dissatisfaction

"the place needs a lick of paint"

"By far the greatest decline is in the branches themselves, beautiful woodwork removed, cheap and nasty vinyl replacing electronic "Wait here" signs no doubt manufactured in Hong Kong"

ATTENTIVE/HELPFULNESS

satisfaction

"there has always been a helpful attitude on the part of the staff at all levels"

"the bank was extremely cooperative and understanding throughout the whole project"

dissatisfaction

"their attitude was unhelpful"

"they seem indifferent"

AVAILABILITY

satisfied

"there was a manager easily accessible"

"I was pleased when you opened on Saturday mornings, at least I can visit my own branch without time off work"

dissatisfied

"There was no currency, I had to go to the *** Branch"

"The closure of the bank on Saturday mornings did cause some inconvenience as I was in employment at that time"

CARE

satisfied

"the personal banker put me at ease when I went to ask for a loan"

"After a bereavement I was in shock and confused and I received gentle and constructive advice from one of the older cashiers who put my mind at rest and helped me through a bad time"

dissatisfied

"I felt we weren't valued"

"Sometimes the bank feels very impersonal"

CLEANLINESS/TIDINESS

satisfaction

"The branch itself is always clean"

dissatisfaction

-

COMFORT

satisfaction

-

dissatisfaction

-

COMMITMENT

satisfaction

"nothing was too much trouble"

"some people did their very best to see if my money had come through"

dissatis

-

COMMUNICATION

satisfaction

"the policy was explained well"

"I was at the counter and requested information regarding a cheque guarantee card as I had terminated my Barclaycard. The cashier explained the main benefits of the Connect card to me and handed me the application form"

dissatisfaction

"I was not give enough information"

"I think that the mini-statements which you get out of the card machine should be set out better, stating deposits, withdrawals etc over the last few weeks not just the balance"

" I approached one of the enquiry desks and asked for information, I was handed a leaflet and that was that"

COMPETENCE

satisfaction

"Mr *** became our mentor and advised us with mortgage problems and lack of money"

"I recently discussed with one of the staff which account would be most suitable for me as I entered further education. The staff answered all of my queries"

dissatisfaction

"I usually put £100 into my cheque account and fill in the side part of the form. I usually put in 10 £10 notes. On 9/7 I only had 9 £10 notes so I put on the form 1 £20 note and 9 £10 notes but made the mistake of putting the usual £100 at the bottom. The young man put the £20 note into one compartment and the £10 notes into another he phoned back later to tell me his till was right so there was nothing I could do, but I know I was right.

COURTESY

satisfaction

"its rare to find such courtesy today"

"the courteous service is a great credit to individual staff and reflects (I hope) the attitudes of the group"

"The business was transacted courteously"

dissatisfaction

"I was getting some cash, when a girl just out of school, said 'sign the back of the cheque' - no 'please'"

"We received a few curt (and unnecessary) letters which almost led us to change banks. Barclays were doing us a favour by allowing us to bank with them"

FLEXIBILITY

satisfaction

"they agreed to waive the charges"

"they sent a messenger to my hospital bed to get a signature"

dissatisfaction

"not enough discretion upon interest rates for the smaller savers with modest incomes. Higher rates are available in other less well known places"

FRIENDLINESS

satisfaction

"The staff, although often changing, are always pleasant and cheerful"

"always with a smile"

"pleasant and good-natured service from most branches and staff"

dissatisfaction

"the personal touch is disappearing"

FUNCTIONALITY

satisfaction

"the terms and conditions were just what I wanted"

dissatisfaction

"I was unhappy on one occasion I came to use a cashpoint and it had been vandalised"

"I had only £15 in my account and I wanted £10 out but the machine was only giving £20 notes"

INTEGRITY

satisfied

-

dissatisfied

"I resented having to sign a cheque at my own branch"

"Right now when my branch is trying to force customers to use cash machines and automatic deposit arrangements I do not want to be treated in this way"

"I found it disturbing to receive someone else's correspondence on more than one occasion"

"I was charged £10 for one error"

RELIABILITY

satisfied

"Recent transfer of account from *** to *** - everything went very smoothly and we experienced no problems at all"

"the new cheque book comes on time, without having to apply"

dissatisfied

"my account was debited with another clients cheque"

"Overdraw a few pounds for 24 hours and you put a charge on the account"

"the personal banker rarely calls back"

"Requested the transfer of my share certificates which were held at one branch to another branch. They forgot about it causing a lot of consternation"

RESPONSIVENESS

satisfaction

"the loan came through very quickly"

"the problems are usually dealt with in a few minutes"

"I applied for a personal loan and I received very prompt service from a Barclays personal banker"

dissatisfaction

"it took five days to clear cheque in an inter bank transaction"

"Often one has to join and wait a long time in a slow moving queue of customers simply to pay cheques in"

"the only time I get annoyed is if I have dashed in with hardly any time to spare and there are long queues and hardly any staff to cope"

SECURITY

satisfaction

"but much more important is the day-to-day feeling of security"

dissatisfaction

"my mother was sent my bank balance by mistake .. it was a breach of confidentiality"

"There is no place available for confidential discussions - mortgages discussed where all and sundry can hear"

"I was able to overhear a telephone conversation which gave me the details of a local firm's bank accounts and the amounts they were overdrawn"

Chapter 10

DISCUSSION

SUMMARY

There was a high level of correlation between the data in the pilot study and the main study suggesting that the results might be applicable in a wide range of service situations.

The data from the pilot study and the main study were consistent with hypotheses one and two. The various quality factors do have different effects on the outcome of the service experience in terms of satisfaction or dissatisfaction and some factors were much more important than others. The factors that appear to have the most impact on satisfaction are attentive/helpfulness, responsiveness, care, friendliness, commitment and courtesy. The key dissatisfaction factors are integrity, reliability, responsiveness, availability, functionality and competence. The recovery factors are responsiveness, attentive/helpfulness, care, communication and flexibility. There were also a number of quality factors which remained unassigned as they appeared to have little effect on satisfaction, dissatisfaction or recovery. However, their effect can neither be counted nor discounted at this stage.

The data in both the pilot study and the main study did not fit with hypothesis three. Most of the factors were not exclusive to any single category, though each one, with the single exception of responsiveness, had a tendency to either satisfy or dissatisfy. Responsiveness is an important contributor to satisfaction, dissatisfaction and recovery. If the test of exclusivity was dropped in favour of a tendency test, and, the recovery factors were amalgamated with the satisfaction factors, the hygiene/enhancing framework is more distinct.

It was also found that the dissatisfaction factors and the satisfaction factors are not the obverse of each other. Further, the satisfaction factors are primarily intangibles and the dissatisfaction factors predominantly concerned with the tangible side of the service delivery, with the exception of integrity.

INTRODUCTION

This chapter takes each of the three main hypotheses in turn and discusses the implications of the data and the analysis contained in both the pilot study and the main study.

HYPOTHESIS ONE

The first proposition of this research was that the various quality factors have different effects on the outcome of the service experience in terms of satisfaction or dissatisfaction, ie some factors are more important than others. This contention had some support in the literature (see for example Myers and Alpert 1968, Parasuraman et al 1985, Johnston and Lyth 1989). Whilst these authors agreed that the relative weighting of the quality factors will vary considerably, the relative effect of individual quality factors had not been identified for service situations.

The analyses contained in the pilot study, investigating satisfaction in a range of service organisations, and the main study, investigating personal bank customers, were consistent with hypothesis one. There were significant differences between the quality factors in terms of both magnitude and type of effect of the factors.

Amount of effect

Figure 10.1 reproduces the frequencies of the various factors in the pilot study and figure 10.2 shows the frequencies for the main study.

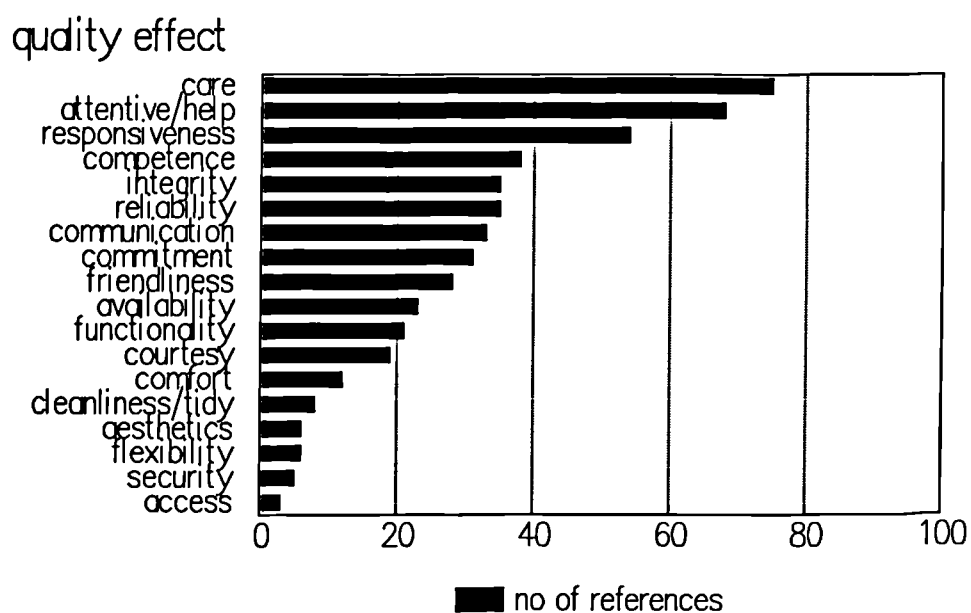


Figure 10.1 Effect of quality factors - pilot study

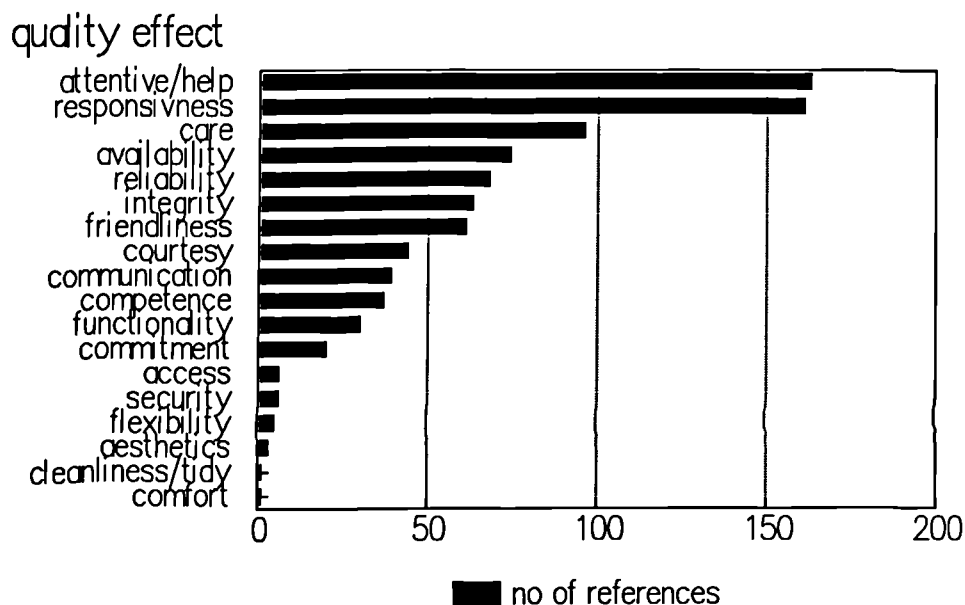


Figure 10.2 Effect of quality factors - main study

The variation in total effect, as represented by the frequency of responses, can be seen to be wide. In the main study there were seven which accounted for nearly 80 per cent of references in the anecdotes (see table 10.1) and six that accounted for less than 2.5 per cent of responses (see table 10.2).

	S	D	R	TOTAL	%
Attentive/help	134	7	22	163	19
Responsiveness	81	54	26	161	18
Care	67	18	11	96	11
Availability	31	43	0	74	8
Reliability	10	58	0	68	8
Integrity	0	63	0	63	7
Friendliness	56	2	3	61	7
					<u>78</u>

Table 10.1 The top seven factors - main study

Access	2	4	0	6	0.7
Security	1	5	0	6	0.7
Flexibility	1	1	3	5	0.6
Aesthetics	0	3	0	3	0.3
Cleanliness/tidy	1	0	0	1	0.1
Comfort	0	0	0	0	<u>0.0</u>
					2.4

Table 10.2 The bottom six factors - main study

The frequency of the factors were less pronounced in the pilot study with nine of the factors accounting for 80 per cent of references, with the top three (17 per cent) accounting for 40 per cent of the references. The bottom five factors (28 per cent) accounted for five per cent of the total references.

It is interesting to note that all the factors in the top half of both figures concern the intangible side of service (with the exception of reliability and availability which in some cases referred to the reliability or availability of associated goods or equipment). The top three items in both studies were the same, attentive/helpfulness, responsiveness, and care suggesting that customers attach great importance to the behaviour, attitude and conduct of staff. The intangible aspects of the staff/customer interface have a significant effect on service quality.

The more tangible aspects, comfort, cleanliness/tidiness, security, access and part of functionality, accounted for a small proportion of the references. This would support

Zeithaml et al's (1990) contention that the "tangibles" is the least important dimension in service quality.

This intangible/tangible split is investigated further in the next section on hypothesis two.

The type of effect

Test two in the main study demonstrated that there was a high degree of correlation between the overall results in terms of comparisons between satisfaction, dissatisfaction and recovery in the pilot study and the main study (see table 9.17). The analysis also revealed that there was a high degree of correlation (at over 99 per cent) between the satisfaction and recovery factors but that the satisfaction and dissatisfaction factors and the recovery factors and dissatisfaction factors were significantly different (see table 9.15).

It is interesting to examine the effects of combining the frequencies that create satisfaction (both recovery and satisfaction) and comparing them to the dissatisfaction factors. Figure 10.3 provides the key factors for the pilot study and figure 10.4 for the main study (the factors which were at the bottom of the frequency table have been removed; the bottom seven in both cases).

quality factors

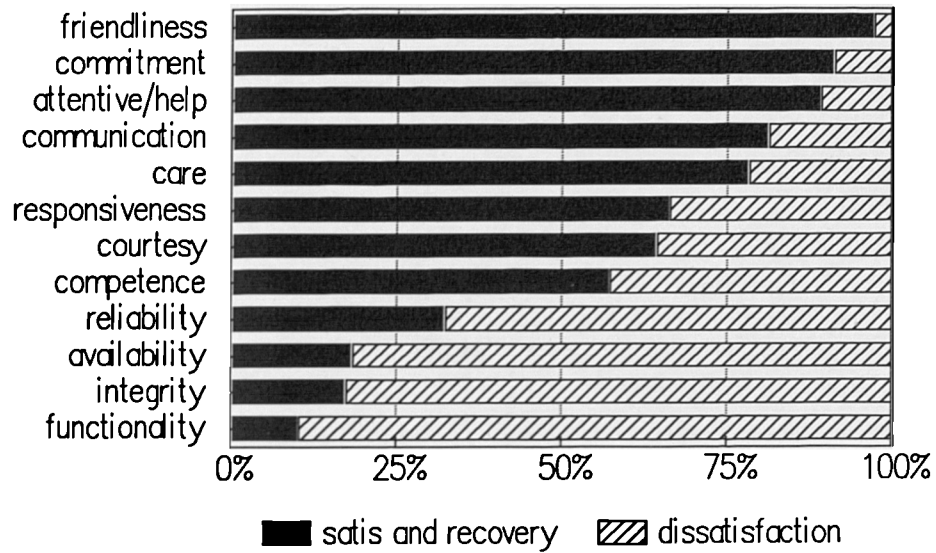


Figure 10.3 Key factors satisfaction with recovery, and dissatisfaction - pilot study

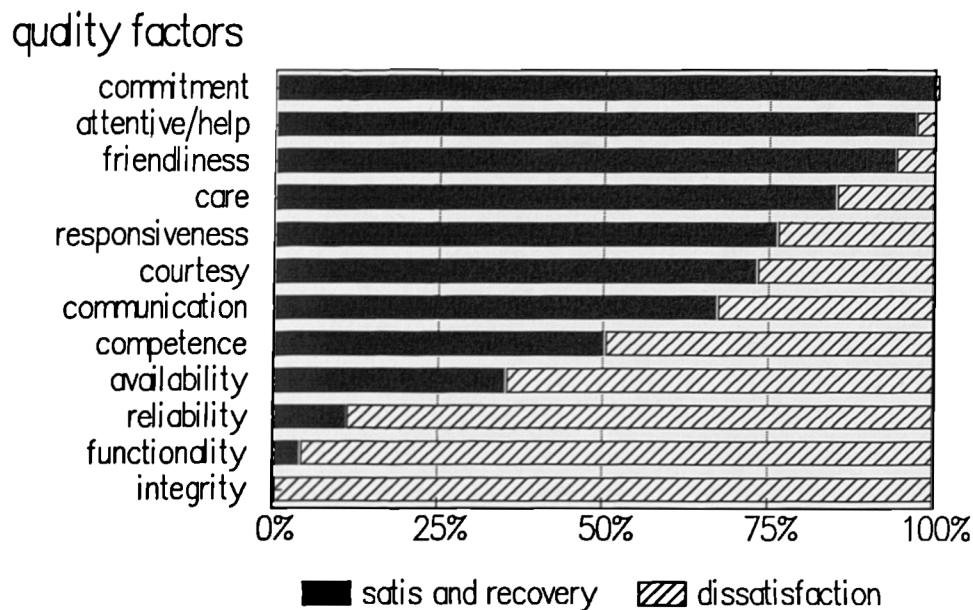


Figure 10.4 Key factors satisfaction with recovery, and dissatisfaction - main study

In both studies the largest effect of the factors is on satisfaction. This seems to be an important point. The fact that staff attempt, in a wide variety of service industries, to be committed, attentive, friendly or caring, for example, appears to have a significant effect of the perceived service quality.

The bottom four factors, all of whose predominant impact was upon dissatisfaction, are the same in both cases. This again is an important point. It suggests that preventing failure in these areas will have a significant effect upon minimising the amount of dissatisfaction experienced by customers.

Summary

The data and the analysis are consistent with the first proposition of this research, that the various quality factors have different effects on the outcome of the service experience in terms of satisfaction or dissatisfaction, and that some factors are more important than others. Furthermore:-

- 1) There is a high degree of correlation between the two studies, in terms of the similarities between the factors that affect satisfaction, dissatisfaction and recovery. Given that this comparison is between a variety of service organisations, spanning many of the sources of the service GDP, with one particular service, personal banking, one can conclude that these results are generalisable, to an extent, across a wide range of service industries. It would be premature to suggest that they would be valid in all situations as there has not been a complete test incorporating all organisations in the service sector.
- 2) There are some factors which seem to have little impact on service quality, for example comfort, cleanliness, aesthetics, flexibility, security and access. However it is conceivable that there may be some service industries where these might be

critical factors which have a significant impact upon satisfaction or dissatisfaction. Security, for example, might be a critical dissatisfying factor for airline passengers or a satisfying factor for customers of Securicor. Comfort might be a critical factor in a five star hotel.

HYPOTHESIS TWO

The second proposition, in line with the two noticeable outcomes of the disconfirmation paradigm, proposed that there are two types of quality factors: satisfying factors and dissatisfying factors, and, that there is also a set of factors which support the recovery process.

The data from the pilot study and the main study seem to be consistent with hypothesis two. There are four analyses that support this conclusion; the correlation between the three categories, the frequency of mention of factors in the three categories, the between-factor comparisons and the correlation between the results of the pilot study and the main study.

1) Correlation between the categories

Test one in the main study proposed the null hypothesis that there are no differences between the satisfaction, dissatisfaction and recovery factors. The null

hypothesis was rejected at 90 per cent for the correlation between satisfaction and dissatisfaction and between recovery and dissatisfaction, in both the pilot and main study (see table 9.15). Satisfaction and recovery were significant at the 99 per cent level in both studies. This would suggest that the factors associated with satisfaction are different from those that create satisfaction whether directly as satisfaction factors, or through recovery. The main point of this analysis is to demonstrate that at least the satisfaction and recovery factors are significantly different from the dissatisfaction factors.

2) Frequency of mention of factors in the three categories

The four factors most frequently referred to as creating satisfaction in the pilot study were attentive/helpfulness, care, commitment and friendliness (a total of 54 per cent of the satisfaction responses). In the main study the top four factors were attentive/helpfulness, responsiveness, care and friendliness which accounted for 72 per cent of mentions (see table 9.25).

The dissatisfying factors were also more sharply identified than in the pilot study. In the pilot study, the four factors most frequently referred to as dissatisfying were integrity, reliability responsiveness

and care (49 per cent of the dissatisfaction responses). In the main study the top four factors, integrity, reliability, responsiveness and availability accounted for 65 per cent of the responses.

The recovery factors were again more sharply identified than in the pilot study. The top four factors were the same, though the ordering was different.

Attentive/helpfulness, care, responsiveness and communication accounted for 89 per cent of the responses (compared to 67 per cent in the pilot study).

There are three key points here.

- a) Firstly, note the similarity between the two studies, as indicated by the correlation coefficients, and as seen here in the similarity of three of the four satisfying and dissatisfying factors and the similarity of both sets of recovery factors.
- b) The second point is to note that the investigation into a subset of customers in a single organisation, personal bank account holders, not only provided similar results to the broader based pilot study, but gave more pronounced frequencies. This might suggest that for a single organisation, although the generic satisfaction and dissatisfaction criteria

might apply, a number of the factors could be relatively more important than others.

- c) Thirdly, although there is some overlap between the categories, there are certain factors which are the most frequently quoted as impacting upon satisfaction, dissatisfaction and recovery.

3) The between-factor comparisons

The percentage of mentions between each factor, after removing the factors which accounted for less than ten per cent of the mentions, shows considerable differences of impact between the factors. The results from the two studies are again very similar, though the ordering of the factors is a little different (see table 9.26).

4) The correlation between the pilot and the main study

Overall there was a high degree of correlation between the satisfaction, dissatisfaction and recovery factors between the pilot and the main study (see table 9.17) and indeed between the four locations in the main study (see tables 9.19. 9.21 and 9.23). All of the relationships were significant at over 99 per cent so it can be concluded that there is no significant difference between

the results of the pilot and the main study or between the four locations in the main study.

Towards satisfying, dissatisfying and recovery factors

It has been shown that not only are there high degrees of correlation between the two studies and between the four locations in the main study but there is also similarity between the specific key factors identified in terms of the frequency of mention and the relative importance of factors.

In terms of satisfaction, the factors which are shown to be important in terms of both the frequency of referrals and the relative importance, for both the pilot study and the main study, were attentive/helpfulness, care and friendliness. Responsiveness did not appear in the between-factor comparisons because it was a high scorer in the other two categories. As it was one of the second most referred to satisfaction factors it was suggested that it should be included as such. Commitment and courtesy should also be included. Commitment was identified in three of the analyses and courtesy was identified in the main study between-factor analysis as a key factor.

Integrity and reliability were the dissatisfaction factors which were identified in all four analyses.

Responsiveness should also be included as it was the third highest mentioned dissatisfying factor though not showing up in the between-factor analysis because of the high frequencies in the other two categories. Availability showed up in three of the analyses, functionality and competence in both of the main study tests.

The four factors which were consistent in the recovery category were responsiveness, attentiveness, care and communication. Flexibility could be added to this list, despite the small frequency of mentions in both studies, as its effect was predominantly on recovery in both studies.

The suggested satisfaction, dissatisfaction and recovery factors, in order of frequency of mention, are summarised in table 10.3.

Satisfying factors	Dissatisfying factors	Recovery factors
Attentive/help	Integrity	Responsiveness
Responsiveness	Reliability	Attentive/help
Care	Responsiveness	Care
Friendliness	Availability	Communication
Commitment	Functionality	Flexibility
Courtesy	Competence	

Table 10.3 The suggested satisfaction, dissatisfaction and recovery factors

A number of additional interesting points arise from this investigation.

- 1) The satisfying and dissatisfying factors were more sharply pronounced in the single organisation case.

Could it be then that whilst there may be generic quality criteria, there are differences to be expected for individual organisations, not necessarily in terms of the effect of the individual factors but in terms of their relative impact?

- 2) The causes of dissatisfaction are not the obverse of the causes of satisfaction

The pairwise comparisons of coefficients of rank correlation highlight the relationship or lack of it, between the satisfying and dissatisfying factors. Berry et al (1985) implied that the factors that tend to satisfy are the obverse of those that dissatisfy, for example friendliness will satisfy but unfriendliness will dissatisfy. This does not seem to be the case. If it were the case, the coefficients would be closer to minus one, rather than zero which suggests no correlation. The analysis has shown that the factors that dissatisfy are predominantly different from those that satisfy and the factors that lead to dissatisfaction are predominantly different from those that satisfy. For example, friendliness may satisfy, but unfriendliness does not necessarily dissatisfy, functionality does not lead to

very satisfied customers, but a lack of functionality will dissatisfy.

3) Reliability

Berry et al identified reliability as the main determinant of service quality. This would be supported by this study but, following on from the previous point, the support would have to be modified. Reliability does not seem to lead to "service quality" but the lack of reliability seems to detract from it. This point identifies a weakness of the SERVQUAL instrument, in that it does not differentiate between satisfying and dissatisfying factors. As "a main source of service quality" managers might be tempted to assume that reliability might give them an edge over competitors whereas this study suggests that if it fails it will only detract. There is a need to try to provide as reliable a service as possible, but moving an unreliable one to a reliable one will not necessarily result in a high level of customer satisfaction.

4) Responsiveness

Responsiveness, as Berry et al identified, is a key quality factor. This study would not only support that contention but emphasise that it is a *critical* factor as it is a key component in providing satisfaction, the lack

of it is a major source of dissatisfaction, and, it is a key component of the recovery process. It was the only factor to appear in all three categories.

5) Recovery factors

The existence of a set of recovery factors supports the "principles of recovery". Furthermore it supports the view that customers, whilst accepting that services may fail, can derive satisfaction from the recovery process. Indeed, there were 59 recovery anecdotes in the pilot study and 44 in the main study; 52 and 14 per cent respectively of the total satisfaction anecdotes. Recovery is a key source of satisfaction and one that the bank seems to be overlooking.

6) Tangibles versus intangibles

One additional difference between the satisfying and dissatisfying factors, pointed out under the discussion of hypothesis one, was the apparent split between the intangible and tangible factors. This deserves a little more attention as some of the "intangible" factors, for example communication, competence, integrity, reliability, responsiveness and security could refer to a tangible issue. Availability, for example, was defined as not only the availability of service facilities, staff and goods to the customer but also the amount of time

each staff member has available to spend with each customer.

Given the overlaps and therefore uncertainty of the allocation in some of the factors between intangible and tangible, another piece of analysis was carried out to try to identify the source of the satisfaction and dissatisfaction.

The main study anecdotes were revisited to ascertain for the factors whether the issue was tangible, product-based, or intangible, service-based. For example, was the situation one about the timely delivery of a statement or cheque book or the speedy delivery of service to a customer.

In terms of the types of failures covered in the 334 dissatisfaction anecdotes, only 45 referred to the service provided. The service failures included situations where customers said that staff had a condescending or patronising attitude or were rude, tactless, unresponsive, impersonal or where the customer felt that he or she had been treated like a nuisance or even humiliated, or where the staff appeared to be "doing us a favour".

In the other 290 instances customers referred to more intangible, product or facility oriented failures. There

appear to be three categories of tangible failure, procedural, bank errors and the bank's facilities. Procedural failures included examples of customers receiving unsolicited mail and leaflets or having difficulty getting a bank product or only getting statements twice a year, or ATMs which only gave £20 notes or not enough currencies being available at the bank. There were many instances of the bank making mistakes, as opposed to having inappropriate products that led to failure, for example money being paid to/from the wrong account, incorrect standing orders paid, or received someone else's correspondence. There were problems with the bank's facilities, for example ATMs out of order/closed, a poor layout of branch or customers who complained that they could not hear conversations due to the glass partitioning.

Table 10.4 summarises the sources of dissatisfaction.

Procedural failures	129
Bank errors	103
Facility problems	57
Service failures	45
Total	<u>334</u>

Table 10.4 Sources of dissatisfaction

Out of the 469 satisfactory anecdotes just 34 were associated with the tangible aspects of the banking service. The majority of the satisfying incidents, 435, provided examples of friendly, helpful, attentive or

caring service provided by the bank's staff. The other 34 expressed satisfaction with the bank's products, for example the speedy provision of an overdraft or loan or the availability of foreign currency, or the facilities, for example the location of the branch or the availability and reliability of the facilities, lego or flowers being available in the banking hall. Table 10.5 shows the number in each category.

Service	435
Bank products	25
Facilities	9
Total	<u>469</u>

Table 10.5 Sources of satisfaction

This additional analysis gives support to the suggestion that, in general, it is the softer more intangible service issues that lead to satisfaction for example commitment, attentive/helpfulness responsiveness of staff, ease of communication. The more tangible factors, reliability of equipment and facilities, availability of equipment and products and functionality of facilities and products tend to lead to dissatisfaction.

The one outstanding exception is integrity; the honesty, justice, fairness and trustworthiness with which customers are treated by the service organisation. This includes the ability to maintain confidence and mutual trust between customer and service provider. This was

the most significant (relatively) - 100 per cent dissatisfying of the dissatisfaction factors and the most significant in terms of the number of mentions 63 out of 334, (19 per cent). This is primarily an intangible issue, though often driven by product or facility failure. It is, however, a key source of dissatisfaction.

An additional point arising from the analysis of the sources of dissatisfaction is the large number of failures associated with the bank and not the customer or a third party. This underlines firstly the relatively large number of mistakes that the bank seems to be responsible for and secondly the large number of opportunities, lost in these cases, for recovery to take place and to gain very satisfied customers.

7) Unassigned factors

It has already been pointed out that five of the 18 quality factors do not feature in any of the categories. They are access, aesthetics, cleanliness/tidiness, comfort, and security. As was concluded under hypothesis one, these factors can neither be counted nor discounted. The design of this particular study does not allow us to conclude whether they are not important or whether they are within the zone of tolerance. Indeed, there may be

situations and organisations where these might be critical factors.

Summary

The data and analysis suggest consistency with hypothesis two. It can be stated that the factors that appear to have the most impact on satisfaction are attentive/helpfulness, responsiveness, care, friendliness, commitment and courtesy. The key dissatisfaction factors are integrity, reliability, responsiveness, availability, functionality and competence. The recovery factors are responsiveness, attentive/helpfulness, care, communication and flexibility.

Furthermore the analyses have revealed a number of other points:-

- 1) The dissatisfaction factors and the satisfaction factors are not the obverse of each other.
- 2) Reliability is a key quality factor but primarily a source of dissatisfaction
- 3) Responsiveness is a critical quality characteristic and is important in terms of the provision of satisfaction, dissatisfaction and recovery.

- 4) The satisfaction factors are primarily intangibles concerned with the interaction skills of the service contact worker. The dissatisfaction factors are predominantly concerned with the tangible side of service delivery, with the exception of integrity.
- 5) A number of quality factors remain unassigned in terms of their effect on satisfaction, dissatisfaction or recovery. They can neither be discounted or counted on as being quality factors at this stage.
- 6) Given the high level of correlation between the pilot study and the main study and between the four locations in the main study one could conclude that the factors will be predominantly the same in many circumstances.
- 7) The sharper distinction of frequency of factors in the main study compared to the pilot study would suggest that although the overall ranking of the satisfaction, dissatisfaction and recovery factors may not be significantly different, a number of them may be relatively more important than others.

HYPOTHESIS THREE

The third proposition was that the three types of service quality factors are mutually exclusive, that is any single factor is either a satisfier (an enhancing factor), or a dissatisfier (a hygiene factor), or a recovery factor.

The data from the pilot study did not support this hypothesis. It was suggested that this might be due to the variety of organisations involved in the pilot study. The main study investigation into a single organisation, a high street bank, and a subset of its customers, personal current account holders, does not appear to have altered the position. Several factors appeared in more than one category, responsiveness occurred in all three, care and attentive/helpfulness in two. However, some further discussion is required before the hypothesis can be totally rejected.

There are some factors which would support the hygiene, enhancing and recovery proposition. There are a number of factors which have been found in only one of the categories. These are summarised in table 10.6.

However, looking at the data, many of these were not exclusive. For example there were some responses for friendliness which were dissatisfying and recovery anecdotes. Table 10.7 summaries the percentage

satisfying, dissatisfying and recovery mentions for the suggested enhancing, hygiene and recovery factors for the main study.

Enhancing factors	Hygiene factors	Recovery factors
Friendliness	Integrity	Communication
Commitment	Reliability	Flexibility
Courtesy	Availability	
	Functionality	
	Competence	

Table 10.6 Enhancing, hygiene and recovery factors

	SATISFYING	DISSATIS	RECOVERY
ENHANCING			
Friendliness	12	1	4
Commitment	4	0	0
Courtesy	7	3	1
HYGIENE			
Integrity	0	19	0
Reliability	2	17	0
Availability	7	13	0
Functionality	0	9	0
Competence	4	5	1
RECOVERY			
Communication	3	6	9
Flexibility	0	1	5

Table 10.7 The percentage satisfying, dissatisfying and recovery mentions for the enhancing, hygiene and recovery factors - main study

Although there are significant differences between the percentages in each category, they cannot, in most cases, be said to be mutually exclusive.

A number of questions arise:-

- 1) Should the test be one of predominance or exclusivity?

The main quality factors were, in all but a few cases, not exclusive to satisfaction, dissatisfaction and recovery. The exceptions, in the main study, were commitment as a satisfier and integrity as a dissatisfier. In the pilot study the only exclusive significant factor was flexibility. It is possible that the overlaps are extreme cases. Given that we are dealing with anecdotal data, covering many service experiences, and that judgement is needed to classify them, there will be a probability, however small, that for someone, in a particular situation, a hygiene factor will lead to satisfaction and an enhancing factor will lead to dissatisfaction.

It would seem that exclusivity is maybe too severe a test as almost all the factors would fail it. Had this not been the test then there would have been grounds for supporting hypothesis three. It is perhaps worth adding at this point that Herzberg et al's (1959) results did not prove that motivating factors never cause dissatisfaction, or that hygiene factors never lead to employee satisfaction. Rather, what Herzberg et al

identified was a tendency for the factors to separate in this way.

Another point in favour of the enhancing/hygiene proposition is the fact that the factors have split off in a way which is intuitively appealing, rather than a counter-intuitive or random fashion, as described in the pilot study. This might be an indication that this proposition might go some way toward explaining this phenomenon.

It may seem inappropriate to apply a total mutually exclusive test to the factors and more appropriate to search, as did Herzberg, for tendencies.

- 2) Are the recovery factors a subset of the satisfaction factors?

Hypothesis three stated that the satisfaction factors and recovery factors were mutually exclusive. However, the correlation between the two would suggest that they are not significantly different. Furthermore, interestingly, if the recovery factors are combined with the satisfaction factors, the only factor which does not fit the hygiene/enhancing classification is responsiveness.

The question then arises, given the high level of correlation between the satisfaction factors and the

recovery factors, both of which lead to satisfactory experiences, are they significantly different sets of factors or are the recovery factors a set of the satisfaction factors. If the recovery factors are a subset of the satisfaction factors then, with the exception of the responsiveness factor, the hygiene/enhancing distinction is much more robust.

If this were to be accepted then the enhancing/hygiene factors would be those contained in table 10.8.

Enhancing factors	Hygiene factors
Attentive/help	Integrity
Responsiveness	Reliability
Care	Responsiveness
Friendliness	Availability
Commitment	Functionality
Courtesy	Competence
Communication	
Flexibility	

Table 10.8 Suggested enhancing and hygiene factors

3) Responsiveness - a quality factor?

Responsiveness is the factor that confounds the proposed classification. However, it is, as Berry et al (1985) stated, a key quality factor.

Some operations management authors have suggested that responsiveness is not a quality factor. Hill (1989), for example, included it under delivery speed and delivery

reliability. Slack (1991) called it the speed advantage, just one of five competitive advantages which included quality. Schonberger and Knod (1991), on the other hand, specifically included responsiveness in their list of quality factors.

While it might be convenient, and tempting, to remove responsiveness from the list to draw closer to hypothesis three, such a removal would also then question why reliability and flexibility should remain. Wild (1980), Hill (1989) and Muhlemann et al (1992) all contested that reliability is different from quality and that the two should be treated separately. Slack (1991), in particular, saw the flexibility advantage as being distinct from a quality advantage.

This discussion may do more to expose the inherent weaknesses in the current understanding of what constitutes quality, than resolve the issue in hand. What is clear, is that responsiveness is a significant contributor to satisfaction, dissatisfaction and the recovery process.

Summary

It was suggested, at the end of the pilot study, that the confounding factor for hypothesis three was the mix of organisations contained in the pilot study. This does

not seem, after all, to be a critical factor. Although the single organisation had an impact in terms of a sharper profile of factors, the overlaps between the satisfaction, dissatisfaction and recovery factors remain.

The hygiene/enhancing framework can only be supported if each of the following conditions apply:-

- 1) the exclusive test is amended into a tendency to separate
- 2) the recovery factors are merged into the satisfaction factors
- 3) responsiveness, a provider of satisfaction, dissatisfaction and recovery is removed from the list of factors.

SUMMARY

This chapter has discussed the hypotheses generated from the literature in chapter six in terms of the results of the pilot study and the main study.

There was a high degree of correlation between the results of the pilot study and the main study suggesting

that the influence of the single organisation on the results was small.

The data are consistent with hypotheses one and two. The various quality factors have different effects on the outcome of the service experience in terms of satisfaction or dissatisfaction. In line with the outcomes of the disconfirmation paradigm and the recovery literature, there are three types of quality factors: satisfying factors, dissatisfying factors and recovery factors.

The data in both the pilot study and the main study did not fit with hypothesis three. Most of the factors were not exclusive to any single category, though each one, with the single exception of responsiveness, had a tendency to either satisfy or dissatisfy. Responsiveness was an important contributor to satisfaction, dissatisfaction and recovery. If, however, the test of exclusivity was dropped in favour of a tendency test, and, the recovery factors were amalgamated with the satisfaction factors, the hygiene/enhancing framework is more distinct. With the exception of responsiveness, the enhancing factors would be attentive/helpfulness, responsiveness, care, friendliness, commitment, courtesy, communication and flexibility. The hygiene factors would be integrity, reliability, responsiveness, availability, functionality and competence.

Furthermore, the discussion revealed a number of related issues:-

- 1) The dissatisfaction factors and the satisfaction factors are not the obverse of each other.
- 2) Reliability is a key factor but primarily a source of dissatisfaction
- 3) Responsiveness is a critical quality characteristic and is important in terms of the provision of satisfaction, dissatisfaction and recovery.
- 4) The satisfaction factors are primarily intangibles concerned with the interaction skills of the service contact worker. The dissatisfaction factors are predominantly concerned with the tangible side of the service delivery, with the exception of integrity.
- 5) A number of quality factors remain unassigned in terms of their effect on satisfaction, dissatisfaction or recovery. Their effect can neither be counted nor discounted at this stage.
- 6) Given the high level of correlation between the pilot study and the main study and between the four

locations in the main study, one could conclude that the factors will be predominantly the same in many circumstances. Though it would be premature to suggest that they would stand up in all situations, they seem to be indicative of the satisfying, dissatisfying and recovery factors in a wide range of service situations.

- 7) The sharper distinction of frequency of factors between main and pilot studies would suggest that although the overall ranking of the satisfaction, dissatisfaction and recovery factors may not be significantly different, a number of them may be relatively more important in some service situations.

Chapter 11

CONCLUSION

SUMMARY

The objective of this final chapter is to set the findings of the study in the context of the literature and to discuss possible implications and extensions.

In this chapter it is suggested that there are two different cognitive processes, one associated with satisfaction and another associated with dissatisfaction. These two fundamentally different processes are aroused by different service quality factors, primarily variables in the case of satisfiers and attributes in the case of dissatisfiers. Furthermore, the satisfaction factors are primarily intangibles, underlining the critical role of service staff in providing satisfaction. The dissatisfaction factors are primarily tangible factors stressing the more systemic issues that tend to result in dissatisfaction.

These factors may either act as *switches*, amending customers' perceptions of the service experience during the service itself, or act as *levers* upon the customers' satisfaction or dissatisfaction thresholds.

While dissatisfaction may be due to a failure on the part of the organisation or the customer, customers seem to have expectations of recovery. Therefore, organisations have the opportunity to effect a recovery. A number of the factors have been identified that support the recovery process. It would appear that recovery returns a dissatisfied customer not to a state of neutrality, but to a state of satisfaction.

It has been suggested that operations managers should be concerned with designing-in satisfaction switches/levers and removing dissatisfaction switches/levers. They should also be concerned with implementing systems to seek out failures and to try to recover from them.

Based on the conceptual and empirically derived models in this piece of work, there is now an opportunity for the subject of operations management to make more progress in the design and development of effective tools to monitor and improve customer satisfaction in service situations.

INTRODUCTION

The objective of this final chapter is to bring together the literature reviews and the findings of the empirical study to summarise what has been found and derive suggestions for operations managers and the subject of operations management.

The first section seeks to make explicit and to discuss some of the assumptions and limitations of this study.

The second section summarises the key findings from the literature and from the empirical study and discusses their implications.

Section three considers the implications of the study for operations managers.

Section four considers the implications for the subject of operations management and service quality in particular.

Section five includes some suggestions for further work that arise from the gaps identified in the literature and from the questions raised in this study.

LIMITATIONS/ASSUMPTIONS

No methodology is perfect and no study is totally comprehensive. It is appropriate then that any serious study should question and criticise its own methodological assumptions. There are three areas that are addressed; the concept of service quality/satisfaction, the methodology and the findings.

1) The concept of service quality/satisfaction

There seem to be two key questions that deserve attention. First, are service quality and customer satisfaction the same or different constructs? Second, is satisfaction/service quality adequately defined by the 18 quality factors?

Question 1 - Are service quality and customer satisfaction the same or different constructs?

This work has assumed that service quality and customer satisfaction are similar constructs. This does not seem to be an unreasonable assumption as there seems to be a great deal of similarity between them. Both the consumer behaviour and the service management literatures seem to be in agreement that consumer satisfaction/service quality:-

- a) is experienced by the customer
- b) is the result of a service encounter (or product purchase)
- c) is the result of a comparison between expectations and perceptions
- d) results in a feeling of satisfaction, dissatisfaction or neutrality

(see for example Grönroos 1984, Parasuraman et al 1985, Berry et al 1985, Wilkie 1986, Oliver and DeSarbo 1988, Cadotte et al 1987, Cooper et al 1989, Engel et al 1993).

There is, however, some debate as to whether satisfaction leads to an assessment of service quality or service quality leads to a feeling of satisfaction (see for example Parasuraman et al 1988, Bolton and Drew 1991). Another emerging, though partly conflicting suggestion, is that satisfaction is concerned with a single transaction and service quality with a global attitude comprising several service transactions that might in total provide a service experience (see for example Parasuraman et al 1985, Cooper et al 1989, Cronin and Taylor 1992, Tse and Wilton 1986, Bolton and Drew 1991).

These two differing views of what appears to be a similar construct seem to represent the two approaches of the two literatures. Consumer behaviour seems to be primarily concerned with the result of a single purchase or encounter and service management researchers are more concerned with the macro level. The two literatures are only just beginning to consider each other's point of view (see for example Cronin and Taylor 1992, Bolton and Drew 1991, Zeithaml et al 1993). This may lead, in due course, to a greater understanding of the similarities and differences between the two constructs.

In order to try and assess a customer's feelings toward a service he or she has received, the questionnaire employed in this study used the words, "think of a time when you felt very pleased and satisfied with a service" and "think of a time when you were very unhappy and dissatisfied with the service". It was decided not to use the words "service quality" as this is a phrase which may be unclear or unfamiliar to the person in the street.

Consumer behaviour and service management academics may wish to debate whether that which was measured by this study was service quality or customer satisfaction. However, such a debate has little effect on the outcome of the study, except in so far as what one should call the outcome state. Whether the outcome is "service quality" or "satisfaction" does not affect the finding

that there are a number of factors that influence the nature of this state.

Question 2 - Is satisfaction/service quality adequately defined by the 18 quality factors?

A major assumption in the work is that service quality can be described and captured by the 18 quality factors. This may not be the case. It is possible that the satisfaction construct may not totally be defined by these factors and that there are gaps in the semantic space that has been referred to as "satisfaction". Such gaps may either have gone unnoticed in the analysis of the anecdotes or those factors may not have been relevant to the particular service situations included in this study. There may be certain service industries where quite different factors might be paramount. In broadcasting, for example, the ability to hold attention could be an essential satisfying factor, or humour might be a key factor for a comedian.

Furthermore, the semantic space which has been referred to as "satisfaction" could well be divided in different ways using different labels than those of the 18 factors. The semantic space could be divided into, for example core service factors, supporting service factors, facilitating factors and going-the-extra-yard factors. Such re-classification of the construct of satisfaction

could possibly have provided support for all three hypotheses.

Language is both a constraining factor and yet is also a tool in the understanding and communication of phenomena. This study took the empirically defined 17 factors from Johnston and Silvestro (1990) which were based upon the recognised twelve factors and five dimensions derived by Berry et al (1985). Whilst some work has criticised the relative weighting and importance of various factors, there do not appear to be any other factors that have been proposed that do not fit with the 18 factors that have been used here. Furthermore, the fact that all the elements of all the anecdotes were captured by the 18 dimensions would add some weight to the argument that they are adequate, though not necessarily complete.

The key point of this study in using the 18 factors is to be confident that the definitions are clear and precise enough to ensure that there are clear boundaries between the factors and that all possible quality statements from the anecdotes have been included in them. The pilot study was instrumental in identifying an overlap between two factors, security and integrity and in identifying some quality statements that did not fit with the existing factors, leading to the suggestion of a flexibility factor. All the quality statements were

included in the allocation of factors and all of them fit comfortably with the factor definitions.

When similar studies are conducted, covering more parts of the service sector, no doubt other factors will emerge. As yet the language, or the required understanding of the nature of satisfaction, does not appear to exist in the service management literature.

2) The methodology

There are three main questions that might be raised about the methodology. First, is satisfaction a result of critical incidents? Second, what is the impact of factors that affect the zone of tolerance? And third, what about the relationship between satisfaction and other decision variables?

Question 1 - Is satisfaction a result of critical incidents?

An underlying assumption of the study is that critical incidents at each transaction during a service lead to a feeling of satisfaction or dissatisfaction. Furthermore, these assessments are then aggregated into an overall feeling of satisfaction or dissatisfaction (service quality) at the end of the process.

It is possible that the causes of satisfaction and dissatisfaction may indeed be things other than critical incidents. It could be that a service process that is provided just below the satisfaction threshold, giving no critical incidents and thus never crossing this threshold, could lead to an overall feeling of satisfaction. It could be that an overall feeling of satisfaction could have little to do with the service process itself or expectations but in fact be a function of the customer's personal disposition on entering the system. For example, a happy customer partaking of an "acceptable" service may emerge feeling satisfied, though not directly with the service, but with him or herself.

The critical incident explanation does, however, appear to have been, at least implicitly, accepted by other researchers. Indeed, it would seem not unreasonable to assume that these conscious events during the service process do have at least some impact on the final outcome. The CIT construct also does provide us with some structure with which to begin understanding this complex mental process. This, however, is recognised as a key assumption of this work.

Question 2 - What is the impact of factors that affect the zone of tolerance?

This study set out to assess the factors that lead to customer feelings as a result of the service process. The literature identified three zonal states; satisfaction, neutrality and dissatisfaction (see for example Woodruff et al 1985, Swan 1988, Zeithaml et al 1993). There seems to be agreement in the literature that satisfaction and dissatisfaction are conscious states which are noticed by customers, and that neutrality, or experiences within the zone of tolerance, would not necessarily be noticed. This study only concerned itself with the factors that would influence the two extreme states of satisfaction and dissatisfaction. It did not set out to identify the factors that might lead to neutrality. It was, however, suggested that a customer not experiencing appropriate levels of satisfaction factors would not be satisfied (ie they would be either neutral or dissatisfied) and that a customer not experiencing appropriate levels of dissatisfaction factors would not feel dissatisfied (ie they would be neutral or satisfied). All the factors were assumed to be potentially neutral. Indeed, given that the satisfaction and dissatisfaction factors were found not to be the obverse of each other, it would follow that this is the case as customers who did not identify integrity as a dissatisfier or attentiveness as

a satisfier, for example, were presumed to be experiencing these within the zone of tolerance.

There is one additional important point. There may be a set of other factors that lead to a state of neutrality. It is possible that some of the unassigned factors might be such factors, though this seems to be unlikely as situations could be envisaged where these could be key satisfiers or dissatisfiers. Comfort, for example, could be a key satisfying and dissatisfying factor in a massage parlour or in a high class restaurant but it might not be a key factor in a jail or on a polar expedition.

It is possible that there are some other, as yet unidentified, neutral factors. However, if there are factors which tend to result only in neutrality, do they matter as they will never result in satisfaction or dissatisfaction? And, furthermore, as neutrality appears to be an "unnoticed" state it might be difficult to design a study to capture such factors.

It would seem to be much more likely that there are some factors, some of which have been identified and others that as yet have not, that some situations have very wide zones of tolerance. Such factors would require particularly extreme stimuli to engender a satisfaction or dissatisfaction feeling from them. Comfort is likely to have a wide zone of tolerance in a bank. Customers

would not necessarily feel that comfort or discomfort is important, but it is likely that stimuli above certain thresholds would be noticed. A banking hall or bank manager's office where a customer had to endure rain, sleet and wind might raise comfort to a conscious level, as might a four inch thick pile carpet and personal reclining arm chairs.

Question 3 - What about the relationship between satisfaction and other decision variables?

This study has focused on service quality and customer satisfaction. It has evaluated quality factors that lead to a feeling of satisfaction or dissatisfaction. However, one's feeling of satisfaction and indeed one's future purchase intentions may not only be a function of service quality. One important dimension not discussed is price. There could be others, for example the monopolistic position of a service provider, or the perceived image of that organisation for innovativeness or for its personnel policies, any of which might influence the customer's expectations and/or perceptions of service quality.

Whilst these factors have not specifically been taken into account, as they were felt to be outside the scope of this piece of work, it could be argued that their effect was, to some extent, included. It has been

assumed that the impact with any other such factors may have been captured in the pre-experience comparison standards. For example, a belief that the price of a particular service was well above average might impact upon the level of expectations which might be higher than one whose price was below average. In terms of the bank, customers' belief that all the banks are "as bad as each other" is likely to have an influence on customers' zones of tolerance. They may be more willing to accept poor levels of service and bank errors as they feel that the treatment would be little different at any other bank.

Understanding the nature of expectations is in its infancy. There is, for example, no agreement about how customers choose their pre-performance standards within the range from minimum tolerable to ideal. Furthermore, it is unclear how these are derived from the many situational variables, including for example price. This study, however, did not set out to assess these relationships, but it is accepted that they may have had an influence on the satisfaction or dissatisfaction experience. The study was primarily concerned with identifying service quality factors and not the causes of the nature of pre-performance experience standards or how their thresholds were derived.

3) The findings

There are four key questions that arise about the findings of this study. First, have the results been correctly reported by customers? Second, how dependant are the results on the factor definitions? Third, how much evidence is there for the recovery factors? And fourth how widely applicable are the results?

Question 1 - Have the results been correctly reported by customers?

The study collected customers' views of events that had happened in the past. It has been assumed that the customers were telling the "truth" about their feelings about those events. It is, however, possible that their stated feelings, after the event, resulted from post-hoc rationalisation of the event in the context of other events and activities, and may actually not relate to their feelings of the event in question at the time. This assumption would suggest that some caution needs to be applied in the use of the "engineering" type prescriptions provided in this chapter regarding the design of factors ("switches" and "levers") during the process. It may be, after all, that they will have little actual effect on the customers' feelings of the service after the event.

It does not, however, seem unreasonable to assume that there is a link between what they said and the event itself. For example, if a customer claims that an inoperative cash machine dissatisfied them, it would seem reasonable to assume that it being put right will reduce the dissatisfaction experienced by future customers.

Question 2 - How dependant are the results on the factor definitions?

The size of the semantic space occupied by each factor could be linked to the number of references made to it. Attentive/helpfulness might occupy a very large space as it accrued a large number of mentions. If this factor were to be split into two factors, attentiveness and helpfulness for example, its relative standing would clearly be affected. Likewise, if other factors were aggregated, into tangibles for example, this too would affect the rankings of the factors.

One cannot be sure whether the factors are of equal weighting, ie cover equal amounts of the semantic space referred to as satisfaction or dissatisfaction. However, this was not the point of the study. Although the *magnitude* of impact was part of the analysis of identifying which factors were important and which were not, the main point of the analysis was the *direction* of the impact. There were some factors that had little

impact in terms of amount or direction and these were unassigned factors. Other factors had effects both in terms of amount and direction. All three hypotheses were concerned with the direction, ie towards either producing satisfaction or dissatisfaction, not necessarily the magnitude of impact.

Eighteen factors have been used here, a greater number than in any similar study. This has had the effect of segregating the semantic space into as many components as possible. The purpose of this was two-fold. Firstly to allow as much precision as possible and secondly to permit operations managers, particularly at the bank, to identify as precisely as possible what they had to do to maximise satisfaction and minimise dissatisfaction.

Question 3 - How much evidence is there for the existence of recovery factors?

There were very few recovery anecdotes compared to satisfaction and dissatisfaction anecdotes. This is not surprising given that the data collected on recoveries was a subset of the satisfaction factors. However, this seems to be more than adequately compensated for by the very few factors that were mentioned and their greater clarity in terms of their direction of impact.

An additional interesting point was that the proportion of recovery factors was significantly lower in the case of the bank than in the multiple industry pilot study, despite no shortage of failure situations in the bank. This might suggest that the bank was less successful than many of the organisations in the pilot study at either identifying and/or recovering from failures.

There has been very little empirical work on recovery so far. At least this might be seen as an important early step.

Question 4 - How applicable are the results to a wide variety of organisations?

The initial view from the literature was that the quality factors were applicable in a wide variety of service situations, indeed Berry al 1985 stated that "Although the relative importance of the categories would vary from one service to the next, we believe that the determinants of service quality in most (if not all) consumer service industries are included in the list". There has been a great deal of support for their contention but there have also been some detractors (see for example Finn and Lamb 1991 and Cronin and Taylor 1992). The pilot study was conducted on the assumption that there would be little difficulty in using a cross industry sample and that the factors and their relative effects were generic. The

findings supported this to some extent though the enhancing/hygiene proposal was rejected. It was suggested that this might be due to the mixed nature of the sample. The main study investigated a service of a single industry. The high level of correlation of the findings between the main study and the pilot study would suggest that, to some extent, there might be only a negligible difference between industries.

However, it is not appropriate for this study to make the claim that the findings are applicable to all industries. Not all service industries were represented in the pilot study, and indeed, it would take the reproduction of the main study in every industry and every service of every industry before the effect of single versus multiple industries could be accurately assessed.

The main concern of this study however, was not necessarily to make claims about the universality of the findings but to assess the directional impact of the various service quality factors on the satisfaction continuum. This it has done and found that some of the factors have a predominantly satisfying effect and others have a predominantly dissatisfying effect.

FINDINGS AND PRESCRIPTIONS FOR SERVICE QUALITY

There are two levels at which this research has provided some findings which may lead to prescriptive statements, firstly at the level of the service process and secondly at the level of the effect of individual factors.

The process level

Although this particular piece of work did not set out to investigate the process of the development of a feeling of satisfaction or dissatisfaction, it is possible to make a number of plausible speculations:-

- 1) Customers enter a service process with a consciously, or a sub-consciously, held view of what constitutes an acceptable level of service. This may be a very specific notion comprising a clear set of "requirements" or it may be a broad and fuzzy belief about what might constitute an unacceptable or more than acceptable outcome.
- 2) During the process pre-performance expectations give way to perceptions and eventually lead to the establishment of an overall assessment of the quality of the service.

Figure 11.1 depicts the service quality process by envisaging two parallel streams of activity. The first is a physical level of the customer entering the service process and partaking in several service transactions which may also include recovery transactions. This is a development of the model contained in chapter six.

The second stream is the mental or emotional level where the customer enters the process with pre-performance comparison standards, which includes an above-expectations zone, an acceptable (ie expected outcome) zone and a below-expectations zone. These zones have been derived from previous experiences etc. As the customer physically goes through the service process the outcome of individual transactions are fed into the mental level resulting in a build-up of perceptions about the process which may also amend the level of expectations for each subsequent part of the process. The overall outcome of the process is a mental state of satisfaction, dissatisfaction or neutrality which will in turn affect attitudes, behaviour and future purchase intentions.

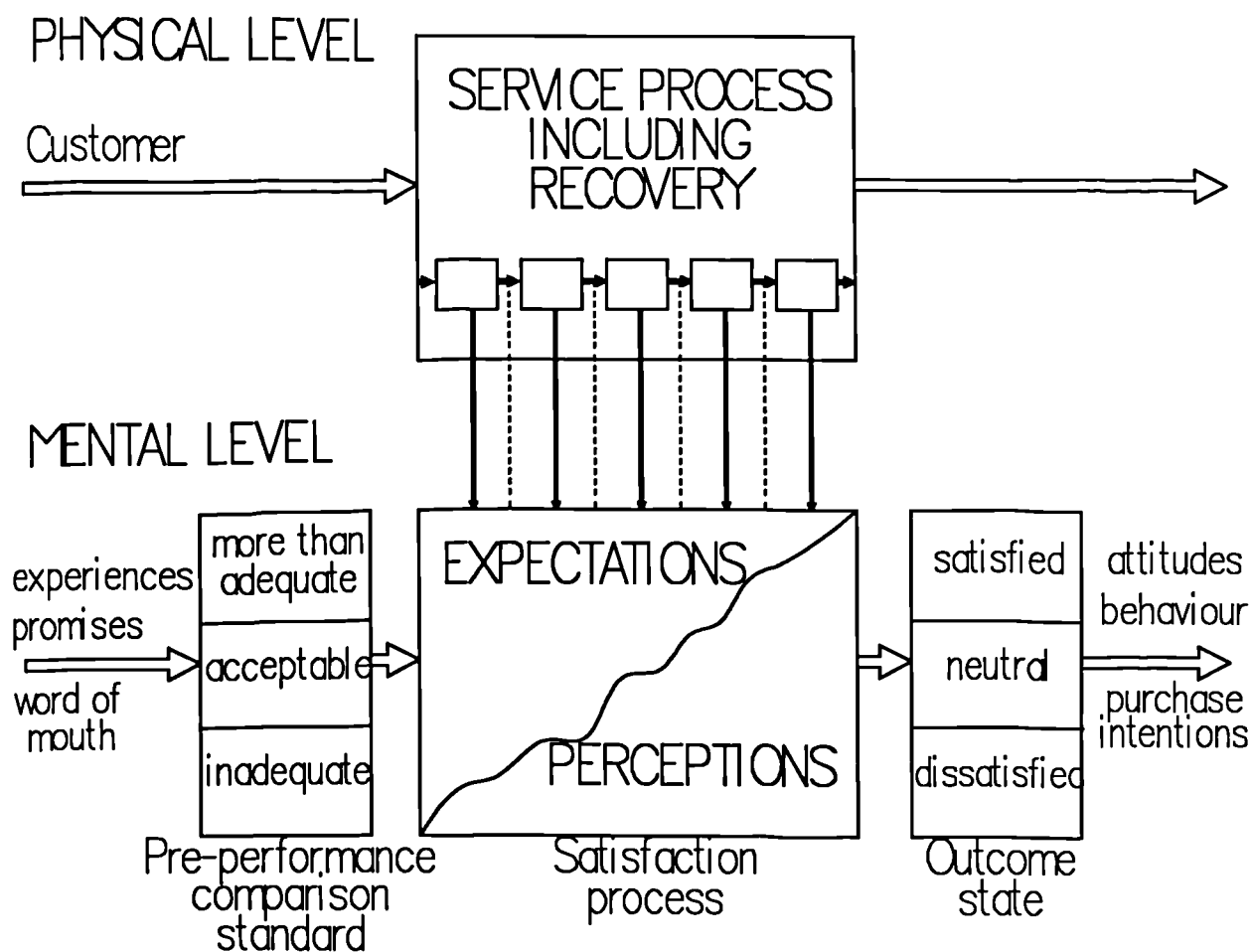


Figure 11.1 A representation of the process of service quality

- 3) Customers "expect" that their level of "expectations" will be met and if there is nothing that happens during the process to take their mental state through either of the thresholds they will emerge in a state of neutrality at the end of the service, ie their expectations have been met, though neither exceeded nor negated, see figure 11.2.

This would suggest that it is the job of the service designer to design, and of the operations staff to manage, this process which may well be different in different service industries. In the bank for example, the key task might be to ensure that no negative critical incidents can or do take place whilst not necessarily seeking opportunities to push customers above the higher threshold. In other service organisations, a leisure park, for example, it might be necessary to design-in points at which customers feelings will be driven through the upper threshold to produce a more positive state. These different strategies are similar to the approaches based on the order winning and qualifying criteria as suggested by Hill (1983), though Hill applied them at a strategic rather than process, or more tactical, level.

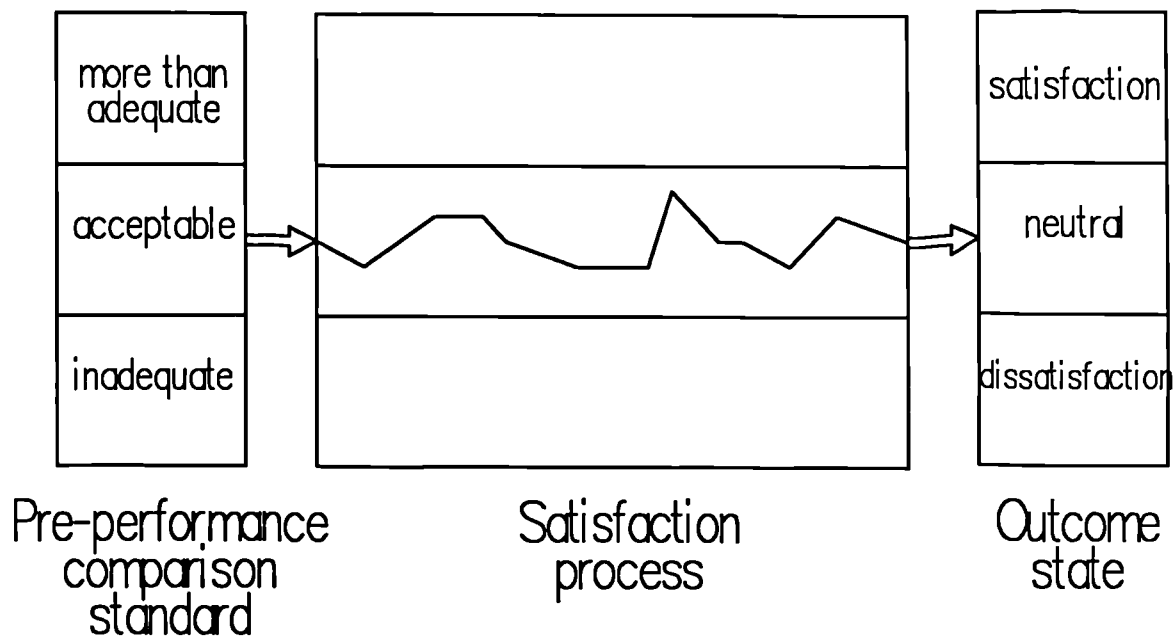


Figure 11.2 A neutral service process

- 4) The zone of acceptable outcomes will vary from customer to customer and from situation to situation. In higher involvement situations it is possible that the width of the zone will be narrower than in low involvement situations. Also in a situation where the customer has little knowledge about the service the zone may be broader than situations where the customer has a clear view of the service process and its likely outcome.

This provides a problem for operations managers in understanding, and then meeting, the needs of customers. For example in the case of an airline flight, a person with no previous experience of flying and envisaging a high risk factor might have very narrow bands of tolerance. He or she may become dissatisfied that no explanation was given for each bump in the air or each unexpected sound (the communication factor). On the other hand, every piece of information provided may lead to a feeling of satisfaction and relief. With experience, though still high involvement, the passenger may be less concerned about information about the landing gear being lowered or turbulence ahead, and have a wider zone of tolerance for communication. A seasoned traveller might have a very broad zone of tolerance, where only extreme levels of communication will have a positive or negative effect. He or she might well sleep through the whole experience including the emergency briefing.

This would suggest that operations managers have to assess the likely degree of involvement that might be felt by customers and their level of experience and try to assess the important factors, and the appropriate levels at which to operate, in order to try to satisfy, or at least not dissatisfy, all customers.

- 5) As a customer progresses through the service system, activities that cause the customer to notice especially poor or especially good service, ie transactions which cross either threshold, will be consciously noticed by the customer. If there are sufficient incursions above or below the line the customer will judge the overall standard of the service to be better than expected (satisfaction) see figure 11.3 or worse than expected (dissatisfaction) see figure 11.4. In essence, failure or success may be noticed, adequacy may not be noticed.

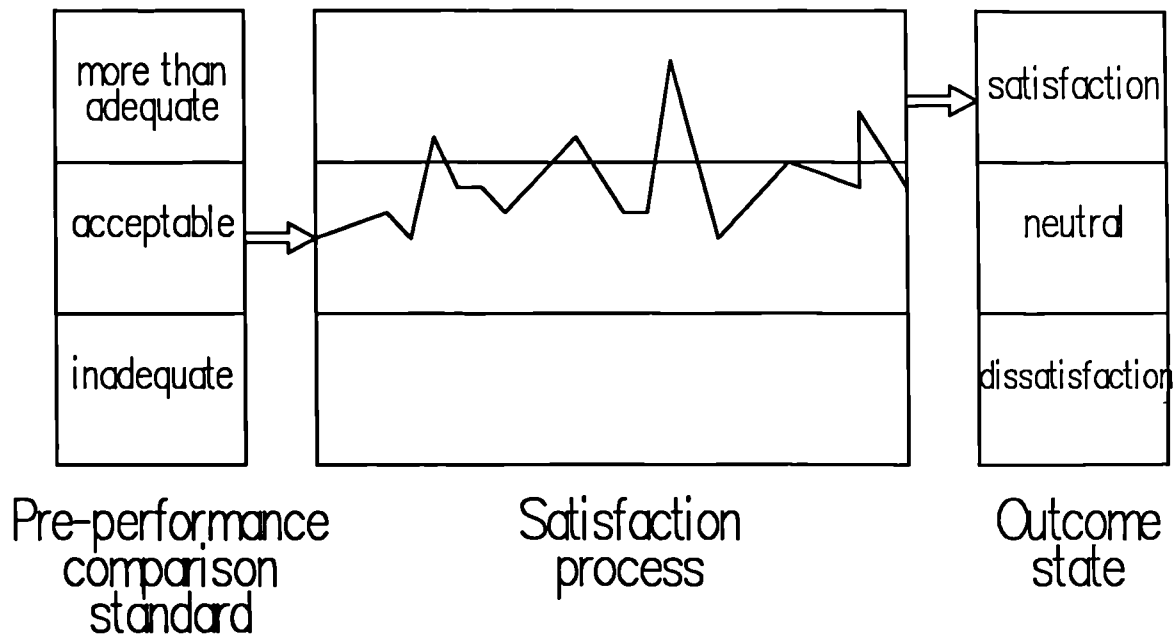


Figure 11.3 A satisfying process

The operations staff then have the task of not only assessing the width of the zones of tolerance for each customer but also trying to understand and utilize the transactions during the process that will have a positive effect on the customer in those situations where it is felt to be important to satisfy rather than satisfy the customer.

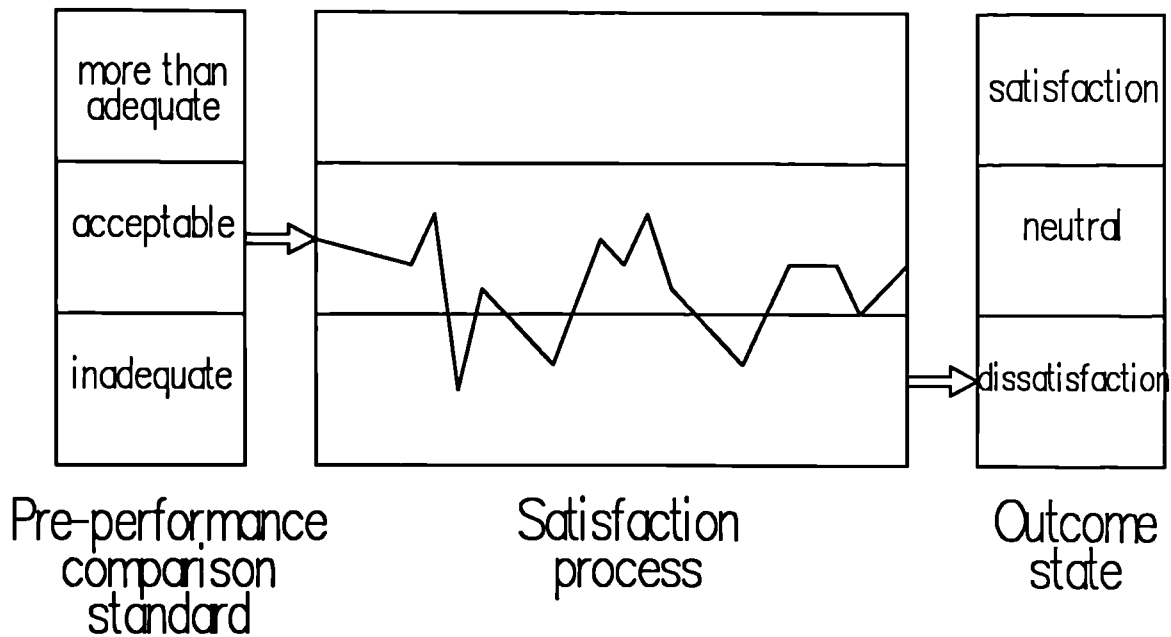


Figure 11.4 A dissatisfying process

A key task for operations staff is then to isolate and remove those transactions that might have a negative effect, or institute recovery activities to deal with the dissatisfaction. Whilst this theme had been pursued in some of the literature (see for example Shostack 1984 and 1987) the idea of identifying positive transactions and utilizing them appears not to have been discussed.

- 6) It is possible that some dissatisfying transactions will be compensated for by satisfactory transactions and vice versa, see figure 11.5.

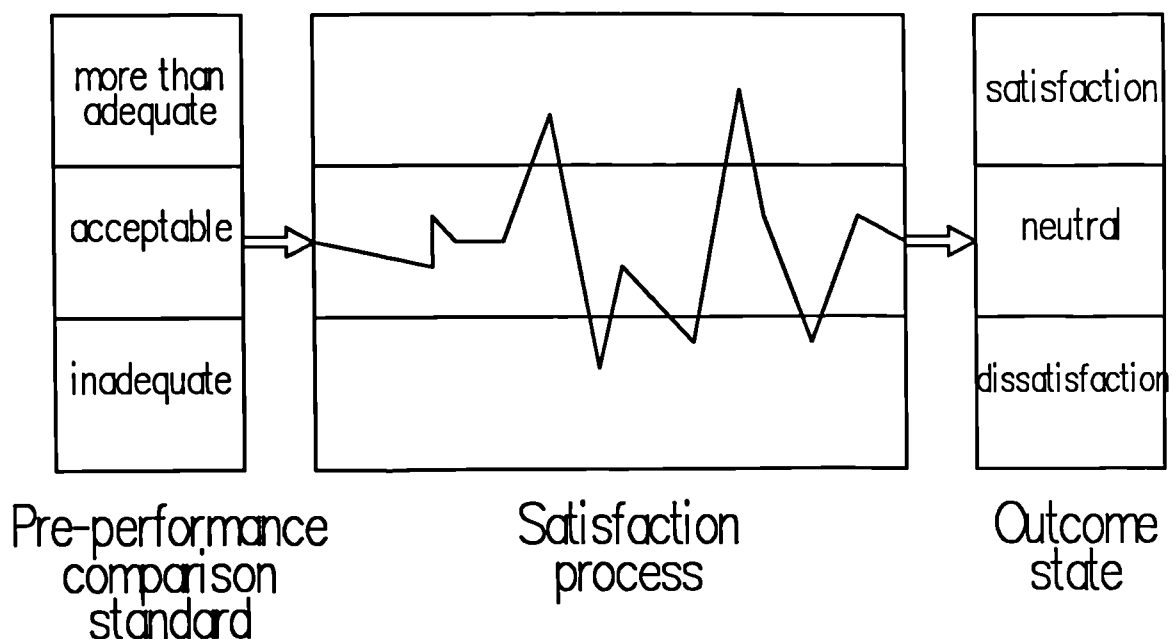


Figure 11.5 A compensatory process

If there are weak points or failpoints in a service system that are maybe too expensive or difficult to remove, the service designer or operator could try to compensate for them by including a number of high spots in the process. Though how many and where they should occur might be difficult to judge. In leisure and

education industries, for example, holidays/courses are often designed to have a high spot at the end not only to ensure the event ends well but also maybe to mask or compensate for any earlier failpoints.

- 7) There seems, however, to be a risk in the compensatory approach. It is possible that, in some situations, a failure in a single transaction may sensitize customers to seek out other failures, having the effect of raising the lower threshold, ie their level of expectations are amended during the service thus making a dissatisfactory outcome more likely, see figure 11.6.

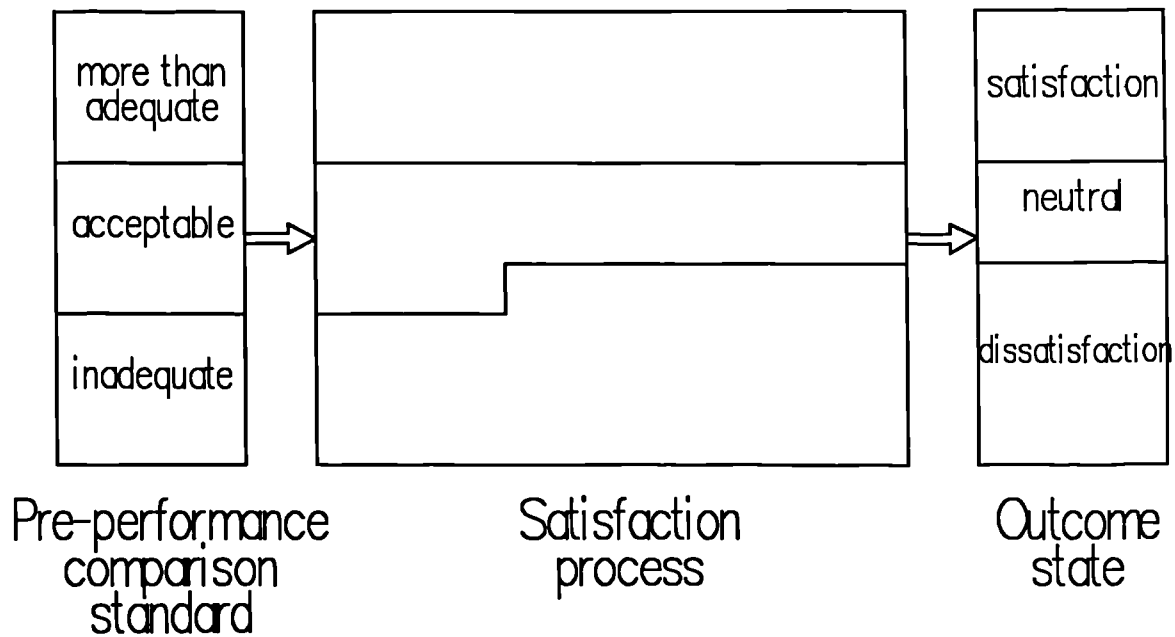


Figure 11.6 The effect of a transaction failure

If a customer experiences a long delay before boarding a flight or encounters reception staff in an hotel that have lost the booking, the customer may be more likely to be concerned about no choice of hot dishes on the flight or a single hair in the bath. If this is the case, operations managers need to be aware of other activities in the process, for which they may not be responsible, that may have had an effect on customers' thresholds.

Furthermore, there is a need to understand how the thresholds can be returned to more normal levels.

- 8) Conversely a success in one transaction may sensitize the customer to notice other successes thus lowering their upper threshold making a satisfactory outcome more likely, see figure 11.7.

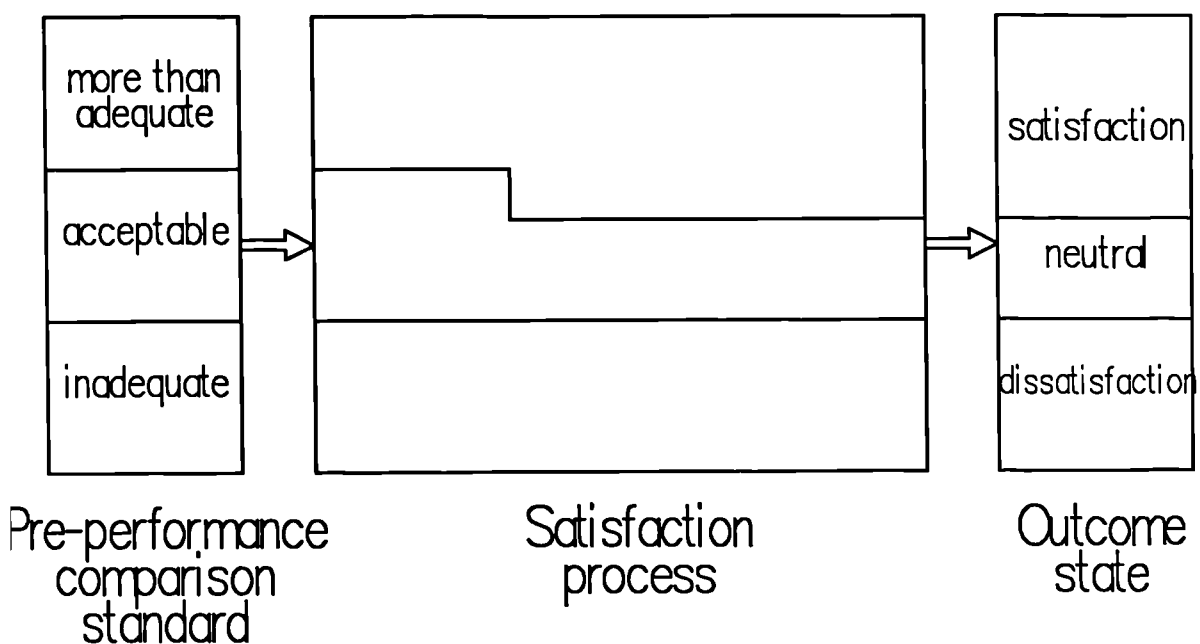


Figure 11.7 The effects of a transaction success

This would suggest, contrary to point six that the high spot should occur at the beginning of the process.

Marketing has a key role in influencing pre-experience thresholds and operations has a key role in managing the level of provision of factors and in managing any dissatisfaction occurring in the process. Operations managers have the opportunity (or task) to design and manage a process to include appropriate *switches* and *levers* such that by providing stimuli at appropriate levels during the process:-

- a) the customer may be switched from the zone of tolerance to a feeling of satisfaction or from the dissatisfying zone to one of neutrality or even satisfaction

and/or

- b) the customer's thresholds can be levered up or down to amend the likely outcome of the process.

A number of important unanswered questions remain. It is unclear how this process evolves or how customers trade-off transaction outcomes to create an overall assessment of service quality. Also, why should customers in some situations compensate for a poor transaction whereas in others they become more sensitized to it? Is this a function of the level of involvement? What is the relationship between success or failure during the

process and the amount of change in the level of the thresholds? How easy is it to manipulate customers' feelings and thresholds during the process? One point that is far from clear is how dependant or independent are the effects of one transaction on the other transactional outcomes further down the process.

The factor level

One important question has, however, been answered by this study, and that is what are some of the various switches or levers that will affect the final satisfaction/dissatisfaction outcome. It has found that, in some service situations, there are some factors whose effect is predominantly satisfying and other factors whose predominant effect is dissatisfying. It is these factors that are the switches that lead to transaction satisfaction, neutrality and dissatisfaction during the process and then contribute to an overall feeling of satisfaction, neutrality or dissatisfaction. It is possible that these might also be the levers that affect the threshold levels for the remainder of the process. By understanding and harnessing the effects of these factors, operations managers should be better able to control and improve their service processes.

Figure 11.8 is a schematic showing the effects of the main factors (based on the data in table 9.12).

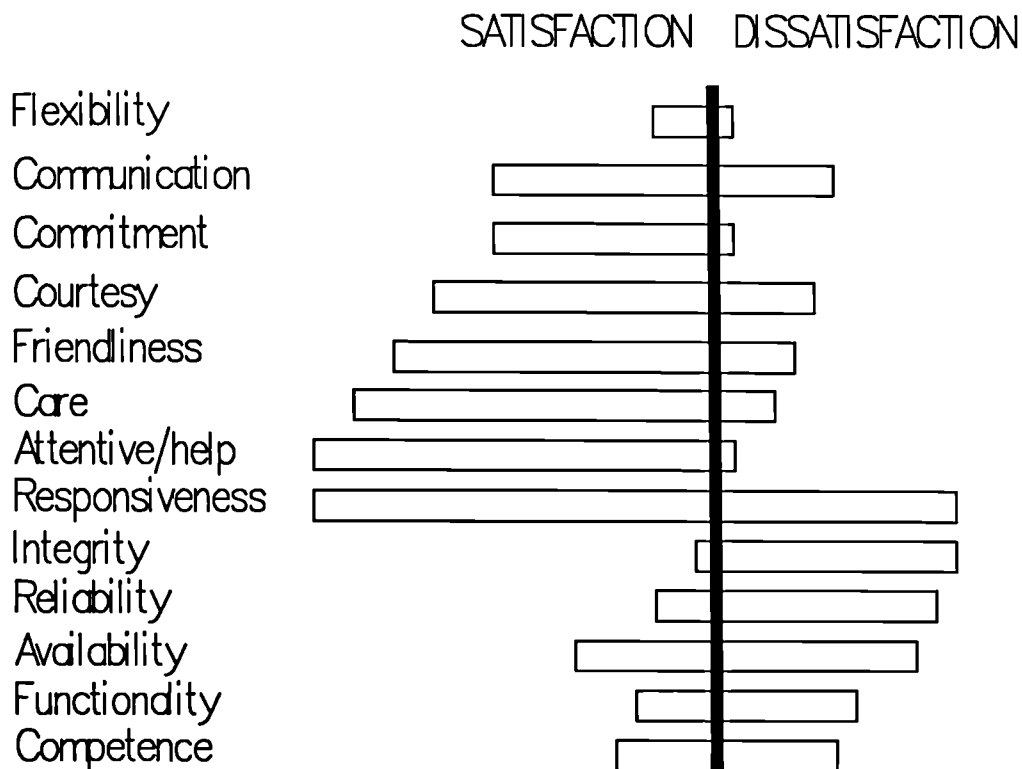


Figure 11.8 Schematic of the effects of the main factors

Each factor is a potential switch that may be evoked at any time during the process by stimuli from the service itself. Although the tolerance thresholds will be "set" before the process, they too may be levered during the process on an individual level. The study has identified two main types of factors or switches, one set that have a predominantly satisfying effect and the other set that have a predominantly dissatisfying effect. This would suggest that operations managers whose key task is the control and maintenance of the system, should concentrate on managing the potentially dissatisfying factors, the bottom six in figure 11.8. Operations managers whose key

task is systems improvement and development, should be more concerned about managing the top eight satisfying factors.

The two different effects of these factors might be explained in similar terms to Herzberg et al's job satisfaction theory in that there may be two distinct mental processes, one of which leads to satisfaction and the other to dissatisfaction and that there are different mental switches that lead to these two states. It is possible that the two different types of factors identified give some support to this. The dissatisfying factors (attributes) have on or off states and their provision above a certain level will have little or no impact upon the customer. The satisfaction factors, on the other hand, as variables, affect individuals in quite different ways as the more of the factor that is provided the more satisfied they might become. There may, however, become a point at which the effect could start to reduce satisfaction and indeed start to dissatisfy.

Figure 11.8 not only identifies the direction of the impact of the factors it also identifies the magnitude of impact from the frequencies of mention in each category. The possible reasons and implications for these will now be considered under the three classifications of satisfaction, dissatisfaction and recovery.

Satisfaction

The sources of satisfaction were predominantly the more intangible factors, attentive/helpfulness, responsiveness, care, friendliness, commitment, courtesy, communication and flexibility. These primarily relate to the personal and interaction skills of the front office service worker. It would appear that he or she has a central and critical role in moving customers from the neutral zone to the satisfaction zone. Furthermore, many of these factors might have a "virtuous circle" effect on the member of staff, making them feel "better" about providing the service, which then reinforces the customer's feeling of satisfaction. The following sections consider each of these factors in turn.

Attentive/helpfulness was one of the most significant satisfaction factors in terms of both direction and frequency of mention. The extent to which the service, particularly contact staff, either provide help to the customer or give the impression of being interested in the customer and show a willingness to serve appears to be a key way that service staff can develop a feeling of satisfaction in the minds of their customers. Maybe this is not unexpected as this is the very nature of service itself; a member of staff "being of use and providing assistance" is the core of the definition of service (Concise Oxford Dictionary). Without this, service does

not exist. Yet surprisingly, a lack of either an impression of being willing to help or the actual provision of help did not, except on a small number of occasions, seem to dissatisfy customers either in the various organisations in the pilot study or in the case of the personal banking customers. This would seem to suggest that customers of many service organisations do not expect staff to demonstrate interest in the customer or a willingness to serve him or her. Maybe we have come to expect sour and dull service and a non-customer orientated approach from many service organisations.

Here, it would appear, lies a key service activity in the armoury of satisfaction creation. Furthermore, it may be a factor that creates positive or virtuous circles, reinforcing "good" service by providing a feeling of satisfaction in the minds of the providers also. Normann (1984) reported on this effect following a training programme asking airline cabin attendants to focus on attentiveness to customers; "a representative statement from a customer six months after the reform programme was 'The attitude of the personnel and value for money has changed dramatically. You would hardly believe it is the same people in those aircraft'. And when we asked a stewardess how it came about that the behaviour of the personnel had changed so much in a short time, she said 'No, we have not changed, but our customers have! Somehow they are quite different now, and that makes

everything a lot more fun and you feel you get something from them, and so you also want to give.'" This would also support the view that attentive/helpfulness is a key satisfying factor and also gives some support for the view that customers seem not to necessarily expect it.

Care, the concern, consideration, sympathy and patience shown to the customer, including the extent to which the customer is put at ease by the service and made to feel emotionally (rather than physically) comfortable was also a key satisfaction factor. This goes further than attentiveness and is concerned with developing empathy with the customer. This too appears to be something that customers do not necessarily expect, and, that when provided creates satisfaction with the service experience. A service organisation exists to fulfil a need, ie a customer has a need for service and, furthermore, in some cases the customer will have a problem with which he or she needs assistance. The willing provision of assistance is satisfying in itself but the additional care and sympathy shown to the customer, a willingness of the employee to see the situation from the customer's point of view, is a strong source of satisfaction. Furthermore, it is possible that a display of empathy creates a stronger bond between the member of staff and the customer thus creating a reinforcing positive, virtuous circle.

The commitment of front office staff to their work, including the pride and satisfaction they apparently take in their job, their diligence and thoroughness was also a source of satisfaction. Again maybe this is a trait that we tend not to expect to be exhibited by service staff. Maybe we experience and accept that most people are "just doing their job". An outward exhibition of pride and actual thoroughness seems to provide customers with good feelings about the service and the service worker, which may then reflect back and reinforce the attitude of the service worker.

Communication with the customer was a key source of satisfaction needed to support recovery. This did not appear as a dissatisfier or a source of satisfaction, other than through recovery. Maybe customers have a wide zone of tolerance of this factor, or it could be that this is not an essential factor in the provision or perception of quality, or that it is adequately achieved by all the organisations in the study. The last point seems to be the most likely as most customers were not first time entrants into the organisations in the study, particularly the bank. They do not necessarily need much information as they may be well aware of the products, services and procedures. This would support the importance of communication in recovery. As there were relatively few failure situations (per customer) which were presumably "new", though unwelcome, experiences for

the customer, he or she would be in need of good, clear and understandable instructions and explanations for this situation. Communication may then be a vital factor for first time entrants into a service system and when out-of-the-ordinary events take place.

Courtesy was quite low down in the satisfaction factors for the bank and did not appear in the list in the pilot study. Is it then that most organisations do provide adequately courteous treatment or is it that customers have a wide zone of tolerance here?

Flexibility, the willingness on the part of the service worker to amend or alter the nature of the service or product to meet the needs of the customer was a satisfying factor in the recovery process.

Friendliness, the warmth and personal approachability (rather than physical approachability) of the service, particularly of contact staff, including cheerful attitude, the ability to make the customer feel welcome was also a key satisfaction factor. While one could imagine situations where an over-friendly approach might dissatisfy, in most cases the existence of cheerful and welcoming service staff provided customers with a feeling of satisfaction with the service. This again is something that customers seem not necessarily to expect as a lack of friendliness was not a great source of

dissatisfaction, but, when it was exhibited it was appreciated and possibly returned by the customer thus reinforcing the provision of friendliness.

Responsiveness, the speed and timeliness of service delivery was a critical factor in providing satisfaction and dissatisfaction. Customers were clearly concerned about the amount of time it took to respond to their needs, and although they would be tolerant for some time, there were thresholds that would cause satisfaction or dissatisfaction. The time to provide a service is maybe more noticeable to customers than other factors, courtesy and commitment for example, and is thus maybe more important to them. Going to the bank is often just one of many tasks to be accomplished in a short space of time. Maybe customers view this activity more as a facilitator of other activities, going to the supermarket is maybe somewhat more positive as it results in a basket full of food and drink for consumption, the use of a cash machine or the acquisition of a loan is merely a facilitator in this process. Whilst customers may have expectations about the length of time a banking process, or indeed, any other process takes, if it is much shorter it may provide a great deal of satisfaction as it provides opportunities for other activities or removes the pressure on what may otherwise be a hasty trip to the shops at lunch time.

Dissatisfaction

The dissatisfaction factors were more tangible issues, concerning "what" rather than "how" the service was provided. Furthermore they are mostly attributes rather than variables (from a customer's point of view).

Whereas one can imagine friendliness or flexibility for example on a variable scale, a service is either available or not, works or not, is reliable or unreliable, the worker is either competence or incompetent, fair or unfair, or honest or dishonest. The only exception is responsiveness. Also, it is possible that the exhibition of many of these traits could lead to negative or vicious circles reflecting the dissatisfaction back to the member of staff who may then take, unless recovery occurs, an even more negative stance toward the customer. The following sections consider each of the dissatisfaction factors.

The availability of service facilities, staff and goods to the customer was a dissatisfier. Customers, not unnaturally, expected service to be available. If a service is available, it leads to a neutral feeling, as this confirms expectations. If it is not, it dissatisfies.

Competence, the skill, expertise and professionalism with which the service is executed and the carrying out of

correct procedures may also be seen by customers as an attribute. The customer expects a service worker to be competent and therefore a high level of competence is unlikely to provide high levels of satisfaction but simply satisfies. A lack of competence will dissatisfy.

Functionality, the serviceability and fitness for purpose or 'product quality' of service facilities and goods again is something customers expect. If the service, goods or facilities do not work it is likely to lead to dissatisfaction.

Integrity, the honesty, justice, fairness and trustworthiness with which customers are treated by the service organisation was the most important dissatisfier in the banking study and the second most important in the pilot study. This is an intangible factor, but like the other dissatisfying factors could also be considered to be an attribute. Customers expect their treatment to be fair, honest and just. Greater honesty and greater fairness are difficult to conceive. However perceived dishonesty or unfairness leads to dissatisfaction.

The reliability and consistency of performance of service facilities, goods and staff, another attribute, was a key cause of dissatisfaction. If agreements are broken customers become dissatisfied. They simply expect that the service will be reliable. However, perfect

reliability or consistency is unlikely to provide satisfaction. Even if one expects a train to be late, for example, its arrival on time may only suffice rather than satisfy.

Responsiveness was also a critical dissatisfaction factor. Unlike the other dissatisfaction factors it is a variable not an attribute. Customers seem to have two thresholds here, one which satisfies, one which dissatisfies and a zone of tolerance between them. A service which takes up more time than expected may have serious consequences for other activities planned for the day or they may simply destroy what has otherwise been a normal routine.

Recovery

Responsiveness was also a factor that was important in the recovery process. If a problem arose, it was at the fore-front of the customer's mind. It is not unnatural then that he or she wants to feel that something is happening and that the service organisation is doing something quickly.

Attentive/helpfulness is also important as the customer needs to feel that something is actually being done or that people are trying to solve the problem.

An empathy with the plight of the customer (care) was also an important component of the recovery process. Customers experiencing problems may not like to feel alone and up against "the system" but that there is someone, representing the system, who understands their situation.

Communication was essential in the recovery process to let the customer know what was going on, thus supporting the attentiveness and responsiveness factors. As a problem or failure provides a time of uncertainty and anxiety for a customer, the provision of information may not only put the customer's mind at rest by explaining how the situation arose but also provide information about what might be done to overcome the problem.

Flexibility was a key provider of solutions in a service recovery. When a problem arises staff may have to take unusual actions to try to rectify the situation.

IMPLICATIONS FOR SERVICE OPERATIONS MANAGERS

It is hoped that this study has provided for a greater understanding of the causes of satisfaction, dissatisfaction and the nature of recovery processes. It has been suggested that satisfaction and dissatisfaction are caused by critical incidents during the process of

service delivery. The delivery of the service and the design of that service to maximise satisfaction or at least minimise dissatisfaction are then key tasks for operations managers.

Operations managers need to be aware of the likely expectations, thresholds and tolerances of customers to the service so that appropriate levels of provision of the factors can be designed-in and then controlled. Close liaison with marketing is important.

It would appear that satisfaction and dissatisfaction development in the minds of customers are two fundamentally different processes, that require two quite different courses of action employing two differing sets of switches and levers.

There is an opportunity to develop and improve service operations by increasing the number of satisfaction switches and putting leverage on the upper satisfaction threshold. There appears to be a relatively easy and self supporting recipe for success. There is a need to engender a helpful, caring, friendly and committed approach in staff. This not unreasonable, but may be unexpected. Behaviour which has a potentially significant impact on the amount of satisfaction perceived by customers in a service situation. Additional satisfaction can also be gained by providing

the service quicker than expected. The existence of these satisfaction factors above certain thresholds may also create positive, virtuous circles, reinforcing the bond between contact staff and customers.

The down-side to increasing customer satisfaction is that the customer's expectations may be increased for the next service encounter, ie their upper threshold rises. Maybe a more appropriate first step for service operations managers is to minimise dissatisfaction as this, it seems, is more likely to be noticed than satisfaction.

In order to control and maintain a service system it would appear necessary to minimise the amount of dissatisfaction perceived by customers during the process. This, however, is maybe less simple to achieve. Failure, and then dissatisfaction, is usually caused by tangibility or integrity problems. It would appear that customers expect and require a reliable, functioning service that is delivered, not too slowly, by competent and honest staff. (The staff can, however, be unfriendly and uncaring as these appear to have little impact on dissatisfaction!) This for the bank would suggest that there is a need to consider the stocking policies of currencies, the selection and maintenance of equipment, the removal of potential errors in the complex cheque processing and standing order systems, for example. These are complex issues requiring more systemic

solutions than the encouragement of appropriate traits in front office staff.

This has maybe been the down-fall of many so-called TQM activities which have often focused on the activities of the front office staff, through smile campaigns for example, without getting to grips with the, albeit more difficult, issues of dissatisfaction removal. Maybe without a strategy that includes both dissatisfaction removal and satisfaction increase, or at least firstly dissatisfaction removal, staff and indeed customers could become justly cynical of the organisation.

Operations managers need also to be aware that if problems do arise during the process, any dissatisfaction created may be offset by satisfactory transactions elsewhere or by recovery procedures put in place, either during the process or at the end of the process. There is therefore a need to sensitize staff to seek out problems and issues before the customer leaves the system.

An additional point is that it is possible that dissatisfaction in the process may also reinforce a negative attitude on staff thus creating negative or vicious circles.

A key task for service operations managers is to try to monitor the customers' feelings during the process so that actions may be taken to compensate for dissatisfaction and to remove or design-out the causes of dissatisfaction. Whilst process control has been prevalent in manufacturing industries it is less so in service industries as it is assumed that the evaluation of service during a process can have adverse effects on the service itself (see for example Armistead 1990). Operations managers then, need either to design monitoring systems that do not interfere in a negative way with the service, or to have evaluations of the design of the service and actively seek out failpoints as suggested by Shostack (1984).

Recovery too is a key tool for development. This is one area in which the bank stood out from the variety of organisations in the pilot study; there were relatively few recoveries in the banking study. This was not due to any shortage of failure situations, indeed many problem situations were identified in the dissatisfaction anecdotes. The organisations in the pilot study seemed to be much better than the bank in identifying failures and putting them right. Indeed most of the satisfactory outcomes in the pilot study were as a result of a failure having happened and an adequate recovery taking place.

The bank does not seem to understand the advantages of recovery or have recovery processes in place. Many of the bank's customers who were dissatisfied wrote that they assumed these were rare events and implied that they had been willing to be "recovered", for example "they credited the money into someone else's account but didn't even bother to apologise". Had the situation been dealt with by a member of staff the dissatisfied customer may have been "turned round". This did not seem to happen. Customers talked about only getting a "reluctant apology", being told "they should have anticipated the problem". It is possible that a more positive and less defensive approach to problems when they arise could turn these into satisfying events rather than dissatisfying ones.

Service operations managers need to realise the significant potential of the recovery process in not only removing dissatisfaction but as a significant source of satisfaction. There need to be good systems for identifying failures in the system, whether the blame lies with the organisation, its goods, equipment or indeed with the customer, to try to recover the situation and create satisfaction. In many cases, a willingness to do something (attentive/help), some empathy with the customer (care) and an apology (care) was all that it took to turn a potentially dissatisfying experience into

a satisfying one. Recovery should be a key tool and activity for managers of service operations.

IMPLICATIONS FOR SERVICE OPERATIONS MANAGEMENT

It is hoped that this study has made a contribution to some of the problems and issues identified in chapters two and three. Managing quality was seen to be a key task for operations management but, partly due to its qualitative and manufacturing past, there seemed to be a lack of understanding of the nature of service quality and how it might be improved and controlled.

This study might provide the operations literature with a service oriented view of quality, not only the key quality factors but also their relative effect on the customer. It would suggest, and indeed support the manufacturing literature, that a process approach to quality is appropriate. The identification of critical incidents, positive or negative, during the process, by designers, staff and/or customers may provide one means of understanding the satisfaction/dissatisfaction switches and levers.

Maybe there are now opportunities to try to integrate the operations process control techniques with service factors to take a more process control orientated

approach to service quality, ie monitor the variables that affect satisfaction and dissatisfaction during the process and in the design of the process.

One of the conclusions from chapter three on quality was that "The literature on the characteristics that connote quality, those features that give the word "quality" meaning, seem to be disparate and incongruous. What seems to be missing from this "menu-based" approach is a conceptual and emotional underpinning of the characteristics". This study has tried to provide just that, a conceptual framework for understanding the process of service quality development during the operation and a framework for understanding the types of impacts and effects of the various quality factors supported by an amount of empirical evidence.

It has also contributed to the understanding of service quality. Service quality was defined as the result of the degree of fit between a customer's expectations of the quality of service to be provided compared with their perceptions of the level of service that was provided (see for example Grönroos 1984, Berry et al 1985, Johnston 1987). From the reviews of the literatures and the study a number of additional statements can be made, and derived, about service quality:-

- 1) Service quality is the result of a process (see for example Swan and Combs 1986, Shostack 1984).
- 2) It is a state of mind developed during the process (see for example Tse and Wilton 1986, Oliver and DeSarbo 1988).
- 3) Customers make judgements about quality during and as a result of a service process (see for example Berry et al 1985 and Cooper et al 1988).
- 4) The process involves a number of separate activities or transactions (see for example Woodruff et al 1985, Bolton and Drew 1991).
- 5) The transaction specific outcomes build up during the process and interact during the process to lead to a final outcome state (see for example Zeithaml et al 1991).
- 6) Customers enter a service process with a consciously, or a sub-consciously, held view of what constitutes an acceptable level of service; their pre-performance comparison standards.
- 7) The pre-performance comparison standards (often referred to as expectations) are a function of the customer's past experiences, word of mouth

information and the organisation's service promises. They may also be a function of perceived service alternatives, self perceived service role and situational factors, (see for example LaTour and Peat 1979, Zeithaml et al 1993).

- 8) The pre-performance comparison standard are on a continuum comprising a zone of tolerance which includes the "expected" or desired or acceptable outcomes. The lower threshold of which leads to a zone of inadequate or unacceptable level of service and a higher threshold bounding the better than expected service levels. (This is somewhat different to Zeithaml et al (1993) who suggested that the upper zone is "desired" and the lower zone is "adequate".)
- 9) During the process pre-performance expectations give way to perceptions and eventually lead to the establishment of an overall assessment of the quality of the service.
- 10) Service quality is related to the size and direction of the expectation-perception gap (see for example Berry et al 1985 and Johnston and Lyth 1991)
- 11) There are three zonal states, satisfaction, dissatisfaction and neutral which may be felt during

the process and at the end of the process (see for example Woodruff et al 1986, Zeithaml et al 1991).

- 12) Satisfaction and dissatisfaction are emotional or cognitive responses that may be noticed by the customer (see for example Oliver 1980, Day 1984). The neutral state may not be noticed (see for example Brandt and Reffett 1989).
- 13) The zone of acceptable outcomes will vary from customer to customer and from situation to situation. In higher involvement situations it is possible that the width of the zone will be smaller than in low involvement situations. Also in a situation where the customer has little knowledge about the service the zone may be broader than situations where the customer has a clear view of the service process and its likely outcome.
- 14) Customers "expect" that their level of "expectations" will be met and if there is nothing that happens during the process to take their mental state through either of the thresholds they will emerge in a state of neutrality at the end of the service.
- 15) There is a multiplicity of factors that impinge upon the outcome (see also Parasuraman et al 1985).

- 16) Some of the factors tend to bring about a feeling of satisfaction and others a feeling of dissatisfaction.
- 17) The existence of quality factors above or below a certain threshold will switch a customer across one of the thresholds. If there are sufficient incursions above or below the threshold the customer will judge the overall standard of the service to be better than expected (satisfaction) or worse than expected (dissatisfaction).
- 18) The quality factors may also act as levers on the level of the thresholds.
- 19) It is possible that in some situations some dissatisfying transactions will be compensated for by satisfactory transactions and in other situations they may act as a lever upon the thresholds sensitizing the customer to seek out other similar and supporting experiences.
- 20) A potentially dissatisfying experience can be turned into a satisfactory one by the service firm recovering the customer (see also Hart et al 1990).

- 21) A resulting satisfaction or dissatisfaction state will have an impact upon future purchase intentions and attitudes to the organisation and its services, and may result in positive or negative word of mouth communication (see for example Parasuraman et al 1985, Engel et al 1993).
- 22) Marketing has a key role in developing pre-performance expectations (see for example Wilkie 1986, Engel et al 1993).
- 23) A key task for service operations managers is to manage the customer during the process (Bowen 1986, Mills and Morris 1986, Morris and Johnston 1987) and to design-in and operate the quality switches and levers.

Figure 11.9 tries to capture these issues in diagrammatic form. Expectations give way to the build-up of perceptions during the process. Each service transaction may have an impact upon this build up as certain service quality factors impinge as either a switch upon the perceptions (the graph) or as a lever upon the thresholds. These switches and levers are either positive (the open arrows), or negative (the filled arrows). The open and filled arrows represent the potential satisfying or dissatisfying factors that have been identified in this study. The diagram illustrates

the effect that these service quality factors have on satisfaction and dissatisfaction.

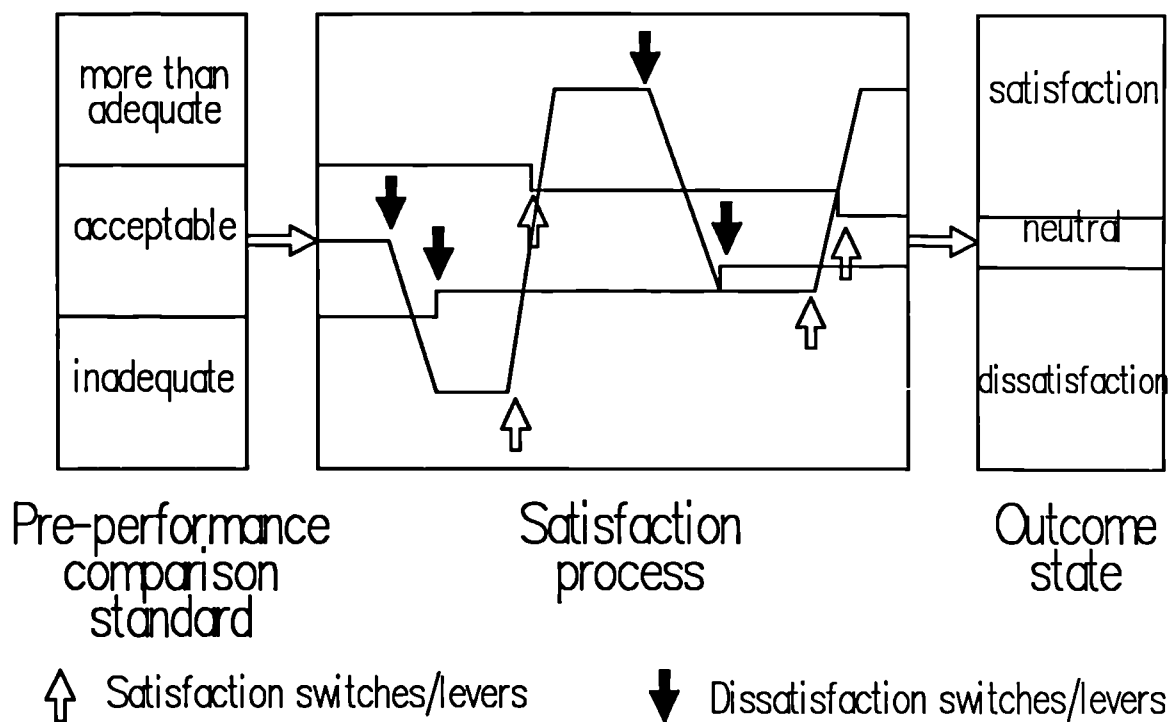


Figure 11.9 Service quality factors, the effect on satisfaction and dissatisfaction.

While the role of operations managers may be to utilise these switches and levers to manipulate the service experienced by the customer and to aid service improvement and development or control and maintenance, a key role for operations management is to develop more

tools and techniques and that will help operations managers in this task.

SUGGESTIONS FOR FURTHER WORK

The various chapters have thrown up many questions that concern not only operations management but also marketing and consumer behaviour. From the point of view of operations management there seem to be many opportunities for further work in this area.

- 1) There is an opportunity to create a process control model, maybe based upon the attribute and variable quality control charts to try to monitor customer satisfaction during the process and after the process. Such work might enable the identification of service quality switches and levers to help develop an understanding as to how the different factors, and the provision of different levels of those factors, come together to create an overall assessment of service quality at the end of the process.
- 2) There is much more work that could be undertaken on the factors themselves. There is a need to take many more service organisations to see how generic the factors, and their effects, are. It might be appropriate also to try to understand the zone of

tolerance for each factor and identify the situations that cause the zone to be broad or narrow. How better can the thresholds be identified and then aggregated for market segments and how can those thresholds be managed or manipulated by operations managers during the process of service delivery?

- 3) This work has limited itself to quality factors, but there is a question about how other factors, for example price, will affect not only the quality factors themselves and their thresholds but also the perceived service outcome. It might then be appropriate to move away from a quality focus to a total perceived utility of the service by the customer.
- 4) Recovery seems to be an important area as it not only removes dissatisfaction but leads to a great deal of satisfaction. While the literature has predominantly concerned itself with customers' expectations of the service itself and the delivery of the service, it has not identified customers' recovery expectations. Are these also zonal? Are there different types of recovery processes suitable for different situations? Where is the best place for recovery to take place, during the process or at the end of the process? What is the relationship

between the degree of dissatisfaction and the amount of recovery of the type of recovery process?

SUMMARY

There seem to be two fundamentally different cognitive processes, one that recognises satisfaction providing stimuli and a second that recognises dissatisfaction stimuli. These two processes are aroused by different service quality factors, primarily variables in the case of satisfiers and attributes in the case of dissatisfiers.

These satisfaction factors may either act as switches amending perceptions of the service experience or act as levers upon the satisfaction or dissatisfaction thresholds.

The satisfying factors are attentive/helpfulness, responsiveness, care, friendliness, commitment, courtesy, communication and flexibility. The dissatisfying factors are integrity, reliability, responsiveness, availability, functionality and competence. Furthermore, the satisfaction factors are primarily intangible factors, underlining the critical role of service staff in providing satisfaction, and the dissatisfaction factors are primarily tangible factors stressing the more systemic issues that tend to result in dissatisfaction.

While dissatisfaction may be due to an organisation's failure to provide adequate service, goods or facilities, it may also be due to a customer's failure to do the right things or manage his or her own affairs. Wherever the "blame" for the failures may lie, customers seem to have expectations of recovery and therefore organisations have the opportunity to make a recovery. A number of the factors have been identified that support the recovery process. They are responsiveness, attentive/helpfulness, care, communication and flexibility. It would appear that recovery returns a dissatisfied customer not to a state of neutrality, but to a state of satisfaction.

Operations managers should be concerned with designing-in satisfaction switches/levers and removing dissatisfaction switches/levers and with implementing systems to seek out failures and to try to recover from them.

The study has identified a number of factors that lead to satisfaction or dissatisfaction or are important in the recovery process. From the conceptual and empirically derived models in this piece of work, there is now an opportunity for the subject of operations management to make more progress in the design and development of effective tools to monitor and improve customer satisfaction in service situations.

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